The intervention

To quest for curriculum advancement, this project aims to carry out two main curriculum initiatives in School of Nursing. In light of the notion of Constructive Alignment, curriculum review pursuits will be performed at two levels. Review exercise were first conducted at a subject level (the subject ‘Nursing Therapeutics 1’, NT1’ and the experience of the subject review were incorporated as a case study for a large-scale curriculum review exercise of a programme ‘Bachelor of Science (Honours) Nursing’ (BSN, Programme code 53055)

The subject NT1 was offered as a core subject of the BSN programme for the last three years and it is the first applied nursing subject in the programme. Since students will take on increasingly more active roles in patient care during their progression through the curriculum, being the first applied subject, it focuses not only on the application of therapeutics theory but also the development of an active learner.

This report will tell you the rationales, procedures and findings of the review exercise at subject level and disclose the relationship among the three components learning outcomes, teaching activities and assessment in a curriculum design. In later part, it will show how the experiences gained from the subject review extend to a curriculum review at a programme level.
Part I: Review of the Subject ‘Nursing Therapeutics 1’

Section A: Overview

This section gives an overview of the design of the revised subject curriculum with reference to the theory of constructive alignment

Context

What was the driving force behind this intervention?

The main driving force of the intervention comes from the inconsistency between the academic ability and clinical performance of the nursing students. That means students who were academically sound might not perform with the same quality in a clinical setting. Being involved in teaching in a nursing subject and supervising clinical practicum in the past few years, I found that one of the reasons may be the difficulty for students to link the classroom experience to field placement setting. This triggers me to take initiative to review my subject to see whether and how this inconsistency is related to the curriculum design in terms of the three components, learning outcomes, teaching and learning activities and assessment. Constructive Alignment is employed as a guiding principle in reviewing the curriculum for the above purpose.

The Revised Subject Curriculum: An Overview

<table>
<thead>
<tr>
<th>Teaching &amp; Learning</th>
<th>Intended Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>Professional competency</td>
</tr>
<tr>
<td>Laboratory</td>
<td>a. Acquire body of knowledge on the responses and reactions of clients under surgery; at the end stage of life, and those experienced gastro-intestinal, hepato-biliary, pancreatic, genitourinary, endocrine and metabolic disorders.</td>
</tr>
<tr>
<td>e-learning</td>
<td>b. Assess and identify health concerns of dysfunctional problems of clients, develop interventions, and related evaluation for use of individuals, families and the at-risk populations</td>
</tr>
<tr>
<td>Face-to-face</td>
<td>c. Apply a synthesis of knowledge in practice to enhance the quality of life and promote health through assessment and therapeutic interventions at different health care settings.</td>
</tr>
<tr>
<td>consultation session</td>
<td>d. Identify relevant assessment data, including signs, symptoms and diagnostic studies for each of the diseases under discussion and analysis the information in a holistic approach</td>
</tr>
<tr>
<td>Clinical practicum</td>
<td>e. Incorporate associated nursing diagnoses into a client-centred care plan for patients with various conditions</td>
</tr>
<tr>
<td>PBL Tutorial</td>
<td>f. Cultivate good caring attitude in performing nursing intervention through the understanding of the holistic nature of the clients and the enhancement of human dignity</td>
</tr>
</tbody>
</table>

Generic competency

a. Strengthen their communication skills with clients through clinical placement and writing care plan
b. Develop clinical decision making power through the discussion and evaluation of the nursing interventions
c. Work independently and in teamwork
d. Encourage Self learning
e. Acquire problem solving skills

Assessment

Portfolio assessment:
- Care Plan
- Peer Review Report
- Clinical Worksheet
- Reflective Journal Quiz and written exam

PBL written report (assessment across subjects)
In reviewing the outcomes of the old curriculum, I found that:
- some of the outcomes were not measurable
- the level of understanding were not highlighted

In formulating these outcomes, I try to:
- Indicate the level of understanding expected in terms of professional competence.
- Write measurable learning outcome statement
- Emphasise the development of generic and intellectual skills that a health care professional would need to possess
## Mapping Learning and Assessment Tasks to Outcomes

<table>
<thead>
<tr>
<th>Intended Learning Outcomes</th>
<th>Teaching &amp; Learning</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a)</strong> <strong>Acquire</strong> body of knowledge on the responses and reactions of clients under surgery; at the end stage of life, and those experienced gastro-intestinal, hepato-biliary, pancreatic, genitourinary, endocrine and metabolic disorders.</td>
<td>Lectures&lt;br&gt;WebCT serving as online-teaching platform provides enormous learning resource&lt;br&gt;PBL Tutorials&lt;br&gt;Clinical practicum</td>
<td>Care Plan&lt;br&gt;Quiz and written exam&lt;br&gt;PBL written report(across subjects through the programme)</td>
</tr>
<tr>
<td><strong>b)</strong> <strong>Assess and identify</strong> health concerns of dysfunctional problems of clients, <strong>develop</strong> interventions, and related evaluation for use of individuals, families and the at-risk populations</td>
<td>Lectures&lt;br&gt;PBL Tutorials&lt;br&gt;Clinical practicum</td>
<td>Care Plan&lt;br&gt;Quiz and written exam&lt;br&gt;PBL written report</td>
</tr>
<tr>
<td><strong>c)</strong> <strong>Apply</strong> a synthesis of knowledge in practice to enhance the quality of life and promote health through assessment and therapeutic interventions at different health care settings.</td>
<td>Care Planning&lt;br&gt;PBL Tutorials</td>
<td>PBL written report&lt;br&gt;Care Plan</td>
</tr>
<tr>
<td><strong>d)</strong> <strong>Identify</strong> relevant assessment data, including signs, symptoms and diagnostic studies for each of the diseases under discussion and <strong>analysis</strong> the information in a holistic approach</td>
<td>Lectures&lt;br&gt;WebCT online-teaching&lt;br&gt;Face to face consultation</td>
<td>Clinical worksheet&lt;br&gt;Care Plan&lt;br&gt;Peer Review Report</td>
</tr>
<tr>
<td><strong>e)</strong> <strong>Incorporate</strong> associated nursing diagnoses into a client-centred care plan for patients with various conditions</td>
<td>Care Planning</td>
<td>Care Plan&lt;br&gt;Quiz and written exam</td>
</tr>
<tr>
<td><strong>f)</strong> <strong>Cultivate good caring attitude</strong> in performing nursing intervention through the understanding of the holistic nature of the clients and the enhancement of human dignity</td>
<td>Lectures&lt;br&gt;Face to face consultation&lt;br&gt;WebCTfor views exchanging</td>
<td>Reflective Journal&lt;br&gt;Clinical worksheet</td>
</tr>
<tr>
<td><strong>g)</strong> Strengthen their <strong>communication skills</strong> with clients through clinical placement and writing care plan</td>
<td>WebCT for views exchanging&lt;br&gt;PBL Tutorial&lt;br&gt;Clinical practicum</td>
<td>Care Plan</td>
</tr>
<tr>
<td><strong>h)</strong> Develop clinical <strong>decision making</strong> power through the discussion and evaluation of the nursing interventions</td>
<td>WebCT platform for discussion&lt;br&gt;PBL Tutorial</td>
<td>Care Plan&lt;br&gt;Peer Review Report</td>
</tr>
<tr>
<td><strong>i)</strong> Work independently and in <strong>teamwork</strong></td>
<td>Care Planning&lt;br&gt;PBL Tutorial</td>
<td>Care Plan&lt;br&gt;Peer Review report</td>
</tr>
<tr>
<td><strong>j)</strong> Encourage <strong>Self learning</strong></td>
<td>WebCT resources for self-learning</td>
<td>Reflective Journal</td>
</tr>
<tr>
<td><strong>k)</strong> Acquire <strong>problem solving skills</strong></td>
<td>Care Planning&lt;br&gt;PBL Tutorial&lt;br&gt;Clinical practicum</td>
<td>Care Plan</td>
</tr>
</tbody>
</table>
Section B: Implementation of Subject Review

This section outlines the procedures for subject review and how constructive alignment is incorporated into the review process.

Subject Review

- Background of the Subject

The subject “Nursing Therapeutics 1” (NT1) was offered as a core subject of the BSN programme for the last three years. It introduces working nursing concepts and focuses on the application of skills to real-life practice. The syllabus covers elements of patient care for clients and their families who have suffered a variety of health problems or functional disorders in a few bodily systems.

This is the first applied nursing subject in the programme, which means that students who are put into the clinical practicum have to learn to apply what they have learned in class into their clinical practicum. However, being involved in teaching this subject and supervising clinical practicum in the past few years, it was identified that most students have difficulties in pulling up the classroom experience and the field placement setting. It showed that the traditional teaching and assessment may imply to students that they can put theory aside going out in the field practicum. In the review process, I found that it was difficult to maintain interaction between teachers and students for such a large class (over a hundred) and I particularly notified that exam alone may not accurately reflect a student’s real performances.

- Procedures for subject review

To start off the subject review, I tried to formulate an implementation plan based on the concept of Constructive Alignment by first looking at the learning outcomes and then revising or redesigning the teaching and learning activities and assessment components to align with them. Below are the procedures that I have carried out. This could serve as a suggestive plan for those who would like to review their subjects.

1. Review and identify learning outcomes to address the generic/discipline specific goals aligned to the professional development and university strategic objectives.
2. Develop, design and schedule creative teaching-learning activities (TLA) and innovative student assessment methods to align with the revised learning outcomes.
3. Explore and develop the appropriate teaching materials or resources to the TLA.
4. To implement the new teaching-learning activities and utilize the new teaching materials or resources.
5. Reflect upon strengths and weaknesses of the new TLA and teaching materials or resources in addressing the revised learning objectives and TLA.
6. Identify the problems or issues give rise by the adoption of the new TLA and student assessment portfolio.

- Major changes brought to TLA and Assessment for subject review

1. A subject web-CT was produced. The beauty of bringing an on-line site was to provide a platform for on-going interactions between parties involved regarding subject-specific teaching-learning issues. The web-CT was a resourceful site to complementing formal face-to-face contacts and optimizes interaction between the students and teacher outside classroom.
2. A portfolio assessment was first introduced to students. The portfolio encompassed a series of assignments that designed to encourage students' monitoring and recognizing the progress of learning and knowing the efforts of self-directed learning and peer learning. The assignments basically help to enhance students' abilities in connecting theory and practice.
3. Reflective Journal which counted no marks was added to assessment to delineate student’s reflective learning experience while preparing the portfolio.
Section C: Aligning Teaching and Assessment with Outcomes

This section (1) explains how constructive alignment is achieved with the chosen teaching, learning and assessment methods, (2) highlights supportive features for promoting smooth implementation, and (3) reflects on the experience for improvement.

Teaching and Learning Methods

Active learning approach

- Methodology

When students entered into their second year, they were required to have a clinical practicum. NT 1 was the first subject they have to go through a path of integration where classroom knowledge and clinical practice matching with each other. The subject also aimed to provide students with the environment to acquire the health care knowledge as well as the generic skills that a professional nurse would need to possess. In order to enhance the integration of theory and practice and to achieve the intended learning outcomes, a variety of teaching and learning activities were selected with appropriate assessment. They were separated sessions while they functioned together to train student to be an active learner.

A. Component at subject level

- Lecture:
  - Learning outcomes achieved
    It aimed to provide students with body of knowledge on the responses and reactions of clients under surgery; at the end stage of life, and those experienced gastro-intestinal, hepato-biliary, pancreatic, genitourinary, endocrine and metabolic disorders.
  - What have I done and what do students do?
    Obviously health problems should be contextualized. Only the theoretical description is not enough to consolidate student learning experience on the above knowledge. Therefore I have made effort on selecting the relevant examples from my past experience and discussed their symptoms, signs and diagnostic studies with students in the lectures. In order to help students to link the theory to practice, students were encouraged to bring up real examples they encountered in their clinical practicum throughout the discussion.
  - Features: No lecture notes, Clear Lecture objectives are provided
    Students are normally passive in learning. They are not aware of what they should learn and what they have to do to learn unless they are told to do so. In order to discourage spoon feeding and encourage student to direct their own learning, I tried not to provide any lecture notes for students to follow in class yet learning objectives were clearly set out for each lecture. Students thus have to focus their learning in class and read other relevant books in order to accomplish those lecture objectives.

- Feedbacks from students
  At the beginning of the subject, students have difficulties in studying without the lecture notes and so they tried very hard in copying notes in lectures. But few weeks afterwards, they realised that written notes alone were not enough to answer the assignment or questions in exam. Therefore they turned their study habit around by either reading textbooks or looking for other resources. Eventually they found that this way of studying broadened their perspectives on subject matters and helped them to know more about the profession. Of course there were also voices of dissent. But in order to change their studying style insidiously, and to the benefits of students, I will continue not giving lecture notes in the next semester.

Remarks:
- Lecture objectives were given to students through webCT before class so that they can have a clear objective to follow.
When teaching a large class, there is always a challenge in building rapport with students. Face-to-face meeting is a good strategy yet it requires a lot of time and effort to know every student’s need. Therefore I tried to develop a webCT that has never been used in this subject before. It functioned not only as an online discussion platform but also as a learning support centre to help students learn actively. Below are the features of the webCT and the strategies I used to attract students in using them.

Features of the WebCT

- **Array of learning resources and additional assets** (i.e. clinical photos with labels and a brief notes, clinical abbreviations, drug dictionary, reading lists and relevant websites, quizzes, crossword exercise). [Examples of learning resources]
- **Forum and chat-room:** It provided for exchange of thoughts and feelings, clarifying doubts and raising questions, making suggestions or sharing personal views and experiences to group-mates, classmates and teacher. [examples extracted from Forum]

Strategies

- **Extract and present examples from webCT in class:** I tried to bring clinical examples from webCT to let student see the relevancy between the classroom experience and the online learning material, students have to go back to webCT for their revision of the lecture content.
- **Give feedbacks frequently:** I checked and responded to student’s comments and questions everyday to make students feel I was always willing to appear approachable to them. Without teacher’s input, it was difficult to make a webCT alive and it cannot even maintain interaction among students.
- **Provide relevant resources:** There were guidelines, assessment criteria and other resources to help students complete the assignment. Students were self-motivated to visit the webCT when they saw its relevancy with the assessment task.

Nowadays, students are getting familiar with this mode of learning. Records from webCT showed a remarkable number of hits from some students during their study for this subject. It was nearly 400 hits for some students and at least several times for the lowest record. [record of hits]

- **Student feedbacks from focus group interview**
  “When I saw some words in ward which I do not know, I always refer to drug.com and drug dictionary provided in webCT which is very useful.”

**Teacher-student consultation:**

It was built in regularly in the subject to provide consultation and feedbacks to students in groups on their planning and writing stages of Care Plan and any difficulties they have encountered in clinical practicum. Since the class size of this subject was over a hundred, this face-to-face contact serving as a learning support to students was particularly important in enhancing the teacher-student interaction.

**Laboratory session**

Laboratory work is the pre-requisite of relevant field placement. It was built in regularly in the subject to provide hands on practice with the knowledge and skills that have been conceptually presented by way of lecture. Lab work can be used for developing clinical skills such as health assessment skills or monitoring body fluids.

**B. Component at programme level**

**Problem-based learning**

The nursing programme required all students to attend a PBL tutorial and complete a PBL report during their first and second year. This PBL tutorial is taken concurrently with the curriculum. An essential component of the problem-based approached is the ‘real-life situation’ which is used to challenge students to gain a deeper knowledge of the concepts and principles of the subject matter. There is no prior presentation of subject matter, but the problems were designed in relation to the knowledge of all taken subjects. Students identify what they need to learn through being confronted with problems, and then learn what they need to know in order to tackle the problem. Knowledge of this subject is therefore further enhanced through this PBL tutorial.
Clinical practicum:
The programme requires students to go clinical practicum 2 days a week to acute and sub-acute hospital settings, where acquisition of clinical knowledge will take place. It aimed to help students build up links between the thinking and doing so that they learn to apply theories into practice with a deeper understanding of the concepts. In order to reinforce the relevancy of theory and application, one of the assessments requires students to collect real clinical data from a patient and base on it to analyze and finally write up a care plan for the selected case.

Lectures, lab work, PBL, Clinical practicum designed either at subject level or programme level were to help students integrate and apply what they have learned into practice.

Assessment Methods

Overview

One emphasis of the intended learning outcomes of this subject is to make students able to apply theory into practice. Therefore this subject adopts a portfolio assessment containing a series of assessment tasks in which most of the tasks require students to write on a real case in their clinical practicum. When preparing these assignments, they work in groups while they have to submit their own report independently. On top of the above assignments, every student has to submit a reflective journal to delineate his/her reflective learning experience while preparing the portfolio. A portfolio assessment is first introduced to this student cohort. The assessment tasks are designed to encourage student’s monitoring and recognizing the progress of learning and knowing the efforts of self-directed learning and peer learning.

Portfolio assessment: Care Plan, Clinical worksheet, Peer Review Report and a reflective journal

- Design of the assessment task

This subject adopts a purpose-specified portfolio assessment which means the purpose of the portfolio is to evaluate the achievement of the intended learning outcomes. It helps students to take individual responsibility for, and ownership of, their own learning. To give evidences of their learning, students can choose to write “care plan”, “clinical worksheet” or “Peer review report” with a written reflection in which students evaluate their own learning. Each component of the portfolio assesses a range of specified learning outcomes and is described below.

Nursing care plan:

- Learning outcomes achieved
  This item aims to assess the skills in data collection, review, analysis, application, and/or synthesis of information and the ability of integrating relevant concepts to solve problems in nursing scenarios. Besides, writing a care plan can enhance the communication between student and the patient, which helps student cultivate good caring attitude.

- What is a Nursing Care Plan
  Care planning is an essential part of healthcare. Writing a care plan is to delineate the plan of care. Steps involved in care planning are
  - initial nursing assessment followed by reassessments as often as the patient’s status demands;
  - identifying a problem list from the assessment and other problems like patient strengths as well as family/relationship problems, which are affecting the person’s overall well-being;
  - writing specific, measurable and attainable goal for the problem to resolve or show signs of improvement within the review period

- What students do?
  Students have to work in groups with this assessment item. With the presented nursing scenarios, students in groups have to develop a nursing care plan to address the patient problems with what they have learned in the lecture, what they have read in the recommended text, what they have got from other information sources. Students have to determine the implications of their findings and develop a Nursing Care Plan Report in a professional practice.
Examples of Nursing care plan

Supportive evidences from student focus group interview and reflective journals

"After finishing Care Plan, we are able to consider more from different perspectives. In the past, we didn’t know how to do a Care Plan, we worked without any rationale. After we learned writing Care Plan, we are able to think of rationales and reasons. We are now able to think of a situation from many different aspects while we only thought from a single aspect in the past. We are able to apply Care Plan skills in placement now." (from interview)

"I found doing care plan can really make us understand more about the role of nurses. This can make us utilize what we have learnt in the lectures in real case which greatly help in our learning and understanding" (from interview)

"This is the first time for us to implement all the nursing procedures in clinical ward. I found that this can strengthen our skills in data analysing and care planning” “We have learnt how to sort out the correct and useful assessment data among plentiful patient data. Since the patient did have other medical diagnosis such as...we have to select suitable assessment data to develop a care plan” (from reflective journal)

"Nursing Process was studied in Year 1, but until taking this course NT1, and with Care Plan as an assignment, I really understand what Nursing Process is about and what Nursing Care Plan is.” (from interview)

"Care Plan is good. It actually can become an assignment of all nursing subjects.” (from interview)

"By doing Care Plan, it trains us to plan or to think about how I can provide nursing care to patient at a specific case.” (from interview)

"In Care Plan, we need to divide things into different priorities; that is very important, good and very practical enough “ (from interview)

"I have learned Critical thinking because for writing a Care Plan, we firstly need to study basic knowledge and to think the whole situation for nursing care” (from interview)

"Therefore we need to provide education to her family in order to meet our goal. Besides this, I learned that nurses are responsible for identifying the problem and giving the most suitable intervention to the patient, patient should also reveal their problem to nurse.... nurse should take the role in encouraging and giving patience to gain cooperation from patients.” (from reflective journal)

Peer review:

Learning outcomes achieved:
The item aims to assess the skills in critically reviewing and analyzing the peers’ draft care plan with the help of a set of assessment criteria based on SOLO taxonomy. This helps develop student’s critical thinking, deeper understanding of subject matter, critical reasoning and the ability to make value judgement on the quality and standard of other’s work.

What students do?
Students have to work in groups on the Peer Review Report. With the insights drawn from group discussion during the work review, a Review Report should summarize the comments for the draft work and describe the feedbacks given to the designated group and justify your discussion with evidence presented in their work. [Example of Peer Review report ]

Supportive evidences from Student’s reflective journal

“In the peer review exercise, we have to familiar with the criteria that should be included in a nursing care plan in order to give comment to the peer’s work. So I have to look through many references to get more idea on the nursing care plan. This exposes me more to write a better nursing care plan.”

“It is extremely useful in identifying the actions needed to implement care for the individual patient. It can provide direction and continuity of care by facilitating communications among nurses and caregivers.”
“I find that it is very interesting to review others’ care plan because sometimes we find the mistakes not only appear in the peer’s work but also in our own. This kind of reflection leads us to have improvement. And when we make comments on other’s work, we have to think of the rationale behind, this make us explore and think more about the care.”

Clinical worksheet:

- **Learning outcomes achieved**
  This activity helps to increase the understanding of the patient health conditions and the nursing role in patient management. Students are guided to have careful observation on specific phenomenon or synthesis of the information based on the data gathered from the charts and from the clinical patient management notes in a clinical unit of their field placement. Working rationales should be developed with the consideration of the real-life scenarios.

- **What students do?**
  Students have to work in groups on the Clinical Worksheet Report. Students in groups going out to clinical placement should have identified all the pertinent facts and actions ascertained if each fact or action is critical and indicative of normal or abnormal patient status or practice standard. In completing the clinical worksheet task, students in the same group develop clinical manifestation profiles and/or collect documentary data and analyze the related data. Individual student has to submit one Clinical Worksheet Report to summarize the process and outcomes related to the clinical sheet task. [Example of clinical worksheet report]

- **Supportive evidences from Student’s reflective journal**
  “In doing the clinical worksheet, I put more effort on how to integrate the information of the health problem rather than focus to the criteria on writing clinical worksheet and nursing diagnosis”
  “In preparing clinical worksheets and the care plan, much interaction with the patient is required and close observation is needed in order to obtain information from the patient. This experience is very valuable actually because the patient care provided to the patient would be comprehensive instead of task oriented.”

Reflective Journal

- **Learning outcomes achieved**
  Written reflection is an essential component when portfolios are used to assess learning outcomes. It aims to help student reflect on their learning, clinical performance and practice. Trigger questions are provided as guides to help student reflect effectively.

- **What students do?**
  Each student is required to submit a written reflective journal including
  (1) self-evaluation of strengths and weaknesses in conducting nursing assessment, in planning the kind of nursing management, and in communicating the clients with whom they worked while completing the clinical worksheet.
  (2) What have been gained from the experience in completing the clinical worksheets and peer review report,
  (3) How does the experience affect your future learning?
  [Example of Reflective journal]

Quiz and Examination:

- **Learning outcomes achieved and what students do?**
  This item aims to measure the learning outcomes in terms of testing the basic knowledge and level of comprehension through the use of “fill in the blank”, short answer questions, and essay-type questions.

- **Features:**
  The essay-type questions, being the most weighted part in the exam, are practical in nature and it tests student’s understanding of a care plan. Thus students could not simply reproduce knowledge but recall and apply what they have learned in doing a care plan in answering the questions. The exam further reinforces student’s understanding on care planning which is one of the major learning outcomes of this course. [Examples of Exam questions]
Supportive evidences from student focus group interview

“If we did not have a Care Plan as an assignment, I am sure many of the classmates are not able to answer the last 2 questions in exam.”

“NT1 exam questions are quite different from other nursing subjects, especially the last 2 questions with scenarios, and we have to answer diagnosis and care plan. It is similar to PBL, but we need to think about Nursing Diagnosis and Nursing Intervention. It is good because it brings us to real situation. We need to think the same way when we work in hospital wards in future.”

Other supportive features:
Since portfolio assessment is new to this cohort, face to face consultation helps to ease student’ worries. I regularly met with groups to provide guidance and make sure they were on the right track.

I have put examples of student’s work with my comments on webCT for other students to learn about it.

Reflection for improvement

Only one group submitted Peer Review Report, but the feedback was promising and encouraging that group members found it a fun and an interesting way to learn what a care plan is. Therefore next semester, I will make the Peer Review a compulsory component in the portfolio assessment.

Feedbacks from Student’s reflective journal

“...we are the only group doing the peer review. I was a little bit worried. It seems that we do not have any other group to share experience or clarify questions. I felt a bit unsafe. When we started doing the review. It was so fun and very useful.”
Section C: Evaluation

This section contains a summary of the evaluation methods and the results obtained. As a closing remark to this sharing, the author talks about the insights she gets in this experience of introducing constructive alignment into her curriculum.

Evaluations

Comparing students’ preparation strategies in problem case with test

■ Methodology

It is hypothesised that Portfolio engages students in more active and deeper engagement with the subject material than exam. This pertains to the development of active learning, reflective learning and application of theory into practice which are the major intended learning outcome of this subject. This evaluation attempts to find out whether the students’ preparation strategies for these two assessment methods were indeed different.

The Assessment Preparation Strategy Questionnaire (APSQ) was used as the base instrument for this investigation. The APSQ is a 29-item questionnaire consists of the following scales: (1) processing of information, (2) focus of learning, (3) professional perspective, (4) academic perspective, (5) achieving strategy, and (6) affective and perception of effects. The original questionnaire was adapted for the particular assessment methods under investigation, namely, portfolio APSPQ and exam APSEQ.

The APSEQ and APSPQ were administered in March 2004 to all the 108 BSN students after the exam and after students submitted their portfolio for assessment. The results of the analysis of the two rounds of APSQ are given in Table 1 below. The results of the paired sample statistics of the APSEQ and APSPQ show that there are significant differences (p<0.05) in four of the six scales (1, 3, 4, 6).

■ Findings and discussion

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean scores</th>
<th>t-statistic</th>
<th>Significance</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Processing of information</td>
<td>12.48</td>
<td>13.19</td>
<td>2.37**</td>
<td>0.02</td>
</tr>
<tr>
<td>2. Focus of learning</td>
<td>12.56</td>
<td>12.06</td>
<td>-1.71*</td>
<td>0.09</td>
</tr>
<tr>
<td>3. Professional perspective</td>
<td>6.29</td>
<td>7.15</td>
<td>5.28***</td>
<td>0.00</td>
</tr>
<tr>
<td>4. Academic perspective</td>
<td>25.80</td>
<td>27.78</td>
<td>3.98***</td>
<td>0.00</td>
</tr>
<tr>
<td>5. Achieving strategy</td>
<td>18.06</td>
<td>18.46</td>
<td>1.01</td>
<td>0.31</td>
</tr>
<tr>
<td>6. Affective and perception of effects</td>
<td>14.98</td>
<td>15.76</td>
<td>2.26**</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Table 1

Scale 1: Students were inclined to concentrate more on memorizing for the exam, and summarizing for the portfolio. (p<0.05).
Scale 3: Students were more likely to relate what they were studying to patient’s condition in clinical practice when preparing for a portfolio assessment (p<0.01)
Scale 4: Students were more likely to adopt a deep-academic approach when preparing for a portfolio. They tended to read widely and engaged in high level cognitive strategies such as critical analysis and relating information from different subjects (p<0.05)
Scale 6: Students were more positive about and enjoyed portfolio assessments than tests (p<0.05).

No significant difference was found in students’ focus of learning and achieving strategy.

The results provide some evidence for the hypothesised merit of portfolio in engaging students in deep learning. The significantly higher scores on the professional perspective scale and academic perspective scale for the portfolio is evident of its advantage of providing an environment for students to apply what they learned into practice and for their development of a professional nurse. This finding is consistent with the student feedback obtained in a focus group interview at a later stage:
“In order to finish the portfolio, we have to work hard, take self-initiative to apply information into practice.”

“By doing a Care Plan, it trains us to plan or to think about how I can provide nursing care to patient at a specific case”

Impact on approaches to studying

■ Methodology

A curriculum in constructive alignment encourages deep approach to studying and discourages surface approach. The impact on students’ approach to studying is therefore indicative of the extent that constructive alignment has been achieved.

The Study Process Questionnaire (SPQ) was used as the instrument for measuring student approaches to studying. The SPQ contains 20 items measuring two factors – deep approach and surface approach. The questionnaire was administered at the beginning (pre) and the end (post) of the semester to SN349 so that changes in student approaches to studying over time may be examined. The differences between scores were computed to represent the changes over time. Such changes were compared with those obtained from another class who have not experienced the constructive alignment intervention (i.e. a control group) using a statistical procedure (t-test).

■ Sample

All students studying in the SN349 were selected as the sample to ensure inclusion of all participants who were impacted upon by the revised curriculum. They were the intake in the academic year 2002/2003 and studying in the second year in the 3-year full-time Bachelor of Nursing programme. After collection of the post test data, there were 108 (out of 110; 98%) successfully paired samples for analysis.

■ Findings and discussion

<table>
<thead>
<tr>
<th>SN349</th>
<th>Sample size</th>
<th>Mean scores</th>
<th>t-statistic</th>
<th>Significance</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-test/Post-test</td>
<td>Pre-test</td>
<td>Post-test</td>
<td></td>
</tr>
<tr>
<td>Deep Approach</td>
<td>108/108</td>
<td>30.83</td>
<td>31.12</td>
<td>0.73</td>
<td>0.47</td>
</tr>
<tr>
<td>Surface Approach</td>
<td>108/108</td>
<td>25.88</td>
<td>28.02</td>
<td>5.46***</td>
<td>0.00</td>
</tr>
<tr>
<td>Table 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Sample size</th>
<th>Mean scores</th>
<th>t-statistic</th>
<th>Significance</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-test/Post-test</td>
<td>Pre-test</td>
<td>Post-test</td>
<td></td>
</tr>
<tr>
<td>Deep Approach</td>
<td>164/164</td>
<td>32.16</td>
<td>31.98</td>
<td>-0.51</td>
<td>0.61</td>
</tr>
<tr>
<td>Surface Approach</td>
<td>164/164</td>
<td>25.84</td>
<td>29.18</td>
<td>8.73***</td>
<td>0.00</td>
</tr>
<tr>
<td>Table 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Mean difference (post-pre)</th>
<th>t-statistic</th>
<th>Significance</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN349 (108)</td>
<td>0.29</td>
<td>0.88</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>Control (164)</td>
<td>-0.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Approach (post-test score – pre-test score)</td>
<td>2.14</td>
<td>3.34</td>
<td>-2.20**</td>
<td>0.03</td>
</tr>
<tr>
<td>Table 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From table 1 and 2, although there were no significant changes in the deep approach scores for both the SN349 group and the controls, it showed that the deep approach score of the SN349 students has been increased after the intervention whereas there was a decrease in the deep approach scores of the control group.

For the surface approach, both groups had an increase in the surface approach scores and the difference were both statistically significant. With such findings in mind, additional t-tests comparison were employed
to test the differences between the focus group and the control group with respect to each group’s differences between pre-test and post-test. The result was shown in table 3. It showed that although the surface approach scores for both groups were increased, the increments for the SN349 samples were smaller than those for the control sample. (t = -2.20, p = 0.03)

The overall result was still encouraging since students were inclined to adopt a deeper approach in their learning. Both the SN349 group and the controls had an increase in surface approach, but the degree of increase of the experimental group was significantly smaller than that of the controls.

As indicated by the change in scores in surface approach for the controls, it is a common tendency for students to adopt a more surface approach to studying as they go through their university study. The current teaching approach seems to have mitigated the process a bit.

**Impact on student learning**

Qualitative data from focus group interview, student’s reflective journal and comments on webCT were used to gain an understanding of the underlying reasons and motivations for student’s attitudes, preferences or behaviour in their learning. Below are the questions used in the interview:

1. In NT1, what teaching and learning activities have you experienced? Which one do you like? Why?
2. What do you think about NT1 assessment tools?
3. What is your desired assessment tool?
4. In NT1, why do you think you had these teaching and learning activities?
5. How would you use the lecture outline and learning objectives in WebCT?
6. How much do you think you have achieved NT1 lecturer’s objectives?
7. Do you think you have achieved the objectives in definitive document, SN PolyU?
8. How would you value NT1 subject knowledge?
9. What is your desired learning outcome?
10. How would you match the subject content and the actual complexity of clinical application? Do you feel if there is a need to learn more?
11. How much effort do you think you have put in this subject?
12. Is there anything you would like us to improve on this subject or the curriculum?

Students’ comments were solicited through a one-hour interview conducted in three sessions at the end of the first semester in academic year of 2003-04. A total of 14 students were interviewed. The interview touched on a wide range of issues from learning to implementation. Below is a selection of students’ comments with particular reference to the impact on learning.

**1. Assessment — Peer Review**

**Peer review enhance reflection and critical thinking**

“I find that it is very interesting to review other’s draft because sometimes we find the mistakes not only appear in the peer’s draft but also in our own. This kind of reflection leads us to have improvement. And when we make comments on the draft, we have to think of the rationale behind, this makes us explore and think more about the case”

**Peer review makes learning fun**

“We told the peer group about our comments. They accepted some of the comments and made corrections; they refused some of the comments and explained clearly to us. Then we learned again! It is not learning only, it is learning in a fun way. The peer review is completely a new experience to us. It gives us opportunity to read other students’ work; and improve both our own work and the others’ work."

“...a comprehensive assessment including both subjective and objective data is required before generating the diagnosis and all the nursing intervention should be based on adequate rationales. I found it interesting to check and correct the assignment as a third person.”

**Solve problems through teamwork**

“Another problem is the modification of nursing diagnosis and the decision of the priority [to the diagnosis]. Because we notice those problems in the peers’ draft, so we aware that we have the same problem and we quickly modify our diagnosis. And then our groupmates have different opinions towards the priority of nursing
diagnosis. Some of us think that it is more important to consider the long-term effect and the worst consequence of the patient, but some think it is more important to consider the patient situation at this moment. In the discussion, we go more in depth to explore the case and we have more perspectives towards the case.” (From reflective journal)

2. Assessment — Care Plan

Care Plan foster critical thinking
“This is the first time I try to write a nursing care plan and the experience of writing a nursing care plan is definitely useful in my career development. I learn that writing a good nursing care plan needs critical thinking so that nurses can solve client problems by performing critical analysis of the factors associated with the problems. I found that we should have a flexible mind. When we give interventions to the patient, we cannot base only from what the textbooks says. For example Many textbooks may suggest that drinking cranberry juice can acidify the urine, however, we need to think about the weather and her age in order to modify our interventions since older person may not like drink that is too sweet.” (From reflective journal)

Care Plan cultivate good caring attitude
“In preparing clinical worksheet and the care plan, much interaction with the patient is required and close observation is needed in order to obtain information from the patient. This experience is very valuable actually because the patient care provide towards the patient would be comprehensive instead of task oriented.” (From reflective journal)

“During interaction with patient, we should be sensitive to the verbal and facial expression because this can help us to detect her emotional change. Since physical examination needs cooperation of the patient, it cannot be carried out until a trusting relationship is developed.” (From reflective journal)

“In order to provide holistic care to the client, we should consider the psychological and emotional aspect of Mrs. Woo (patient). Simply presence and listen attentively to her concern had effectively reduced her anxiety and fear in hospital. After completion of this assignment, I recognize the importance of emotional support and respect to clients. ... I would pay effort to assess the client's support system in the community. I had not come across the family of Mrs Woo. I need to approach her family members and relatives in order to have a comprehensive understanding of individual need” (From reflective journal)

Care Plan promotes active-leaning and deep leaning
“Firstly planning nursing care involving complete assessments, nursing diagnosis, intervention and evaluation, using NANDA system to express is very new to us. Therefore, we did have to spend extra time in the library to figure out what are the meanings and borrowing references to get deeper understanding” (From reflective journal)

Care Plan can be considered as an assignment in other Nursing Therapeutic subjects
“Care Plan is good. It actually can become an assignment of all subjects.” (From interview)

3. Team work
“As a nurse, we always need to work in group or in a team, after this experience I know what elements are needed in working in a group and I know how to provide good contributions to the group in future.”

4. Authenticity leads to increased perceived transferability of learning
“I really think that NT subject is related to our clinical placement. As in this semester, I have my placement in CMC surgical ward, many procedures and operations of nursing intervention are similar to those mentioned in lectures and laboratory sessions. I think NT subject offers us theories and ideas that we need to apply in clinical settings” (comments from webCT)

“Studying Nursing Therapeutics 1 allows me to have a better understanding on the diagnosis and treatment of various diseases and the common abbreviations of various medical terms which are very applicable in the ward” (comments from webCT)

5. Impact on learning style
“We don’t study just for the sake of exam; the importance is going to practice and to apply theory in ward”
“We need to work hard, take self-initiative to apply information into practice.”

6. Face-to-face consultation facilitate clear student’s doubt in learning process
“Consultation was specifically for solving out case problem of our ward. That is most helpful. Because we are in Orthopedics ward, it is difficult to have a case that is related to NT1, so unable to do Care Plan. Marian did help us to solve our problems, because our clinical instructor was absent once, we went to work in another ward. With Marian’s help, finally we were able to work on another case for Care plan. During that time, it was very difficult for us. Only Marian helps us.”

Summary of Data Analysis

Assessment tasks were proved to align very well with the intended learning outcomes although they generate a heavy workload to both the teacher and students. All the assessment tasks are inter-related and functioned cohesively to engage students in active and reflective learning.

For example, both WebCT forum and reflective journal can help students reflect on and communicate what they have learned to teacher or other classmates.

Portfolio assessment including Clinical worksheet, Care Plan and Peer review have been shown to be constructive, providing authentic and contextualized assessment that promotes deep learning and skills development such as active learning and critical thinking.

In particular, peer review is an interactive and dynamic process that involves learners in assessing, critiquing and making value judgment on the quality and standard of work of other learners, and providing feedback to peers to enable them enhance performance.

One important outcome of this subject is to enable student to apply theory to practice. It is evident that the learning outcomes have been aligned with appropriate teaching and learning activities and assessment.

“There is no doubt that Marian has sufficient planning. What she has done is very coherent. The assignment and exam paper made me to think much more. Now I know how to write Nursing Diagnosis which is for my own benefit of nursing my patients in future. I learned the working process of a nurse, the way of thinking and how to write Diagnosis and Care Plan. The questions in exam are the same.”

Problems
- Without lecture notes, students had difficulty in learning in class
- Students claimed they will focus on listening even when there are lecture notes, but they confessed that if time is pressing, they will just go through the notes for the exam.
- Learning time is packed, especially when guidance is not enough
- Submission of assignment via WebCT is not convenient
- The affected areas in clinical photos should be highlighted
- Teachers always face a dilemma - to train students to be an active learner while a lot of complaints about lack of guidance. Students are used to receive information and guidance from teachers.