

# Encouraging University-wide Adoption of 21st Century Skills Learning and Assessment

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## Abstract

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Lecturers have found increasing number of freshmen unprepared for university learning. The issues range from time management to metacognition, from communication skills to information literacy. Today's world characterized by virtual omnipresence of Internet and handheld/wearable gadgets doubtless creates its own challenges. How can universities address these and help students be ready for their university years and beyond?

This paper aims to share some thoughts and experience, with emphases in the need for (1) academic leaders to promote and facilitate wider change beyond particular classrooms by (2) enabling all lecturers, regardless of their subject, to be models who enforce and assess acquisition of these skills in their students.

This paper argues that these disruptions are so sweeping that it's more effective that academic leaders lead the initiatives to address it. This is particularly important in settings where many lecturers don't have pedagogical training. Faculty meetings can be fine-tuned to become meeting-cum-workshop which serves as in-service professional development. Professional learning would then be tightly connected with beneficial real-world reflection for everyone. The tangible outcomes can be as simple as integrated scoring rubrics which encourage both lecturers and students to strive toward common goals encompassing both hard- and soft-skills relevant for 21st century learning.

**Keywords:** assessment, scoring rubric, in-service professional development, university readiness.

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## A. Introduction

Several years ago I was invited by a university to lead their curriculum overhaul initiative. There was no specific goal they had in mind apart from the perception that their curriculum was out of date and was built sporadically, hence they wanted to have a coherent and relevant curriculum for their specific mission and student demography.

During analysis phase, I sat in classes, met with administrators, lecturers, and students. To my great surprise, the single biggest issue I found was rampant plagiarism among students. Worse still, these students were not even aware that what they were doing was wrong; they were oblivious of the concept and term "plagiarism". As far as they're concerned, they're just doing what students are supposed to do – working on whatever their lecturers assign them with the minimum effort required to pass the course.

Plagiarism is relatively easy to spot – especially when it's born out of ignorance – and it can hint many greater issues behind it. In this case above, that early finding on rampant plagiarism had led me to also find that:

1. Students didn't understand what is expected from them in their learning process, hence they laid back and just did the bare minimum to get "off the hook", as they perceived their assignments to be.
2. Students didn't have strong intrinsic motivation to study apart from getting a degree and securing a job – any job – with that degree, hence they didn't push their lecturers to demand the best they deserve to get from their own learning process. They put a high value on their diploma, but viewed their school years as a necessary evil to endure to get what they wanted.

3. Students who came from lower income families tended to have had poorer learning experience in their K-12 years with less engaging teachers, hence they had very limited expectations from their school and teachers. They also had less stimulating environments around them, which was visible from their withdrawal in classes, expecting to be spoon-fed instead. Worse still, many of them were surrounded by adults (parents, extended family members, close-knit neighborhood) who may not be so excited about their education. They had been structurally demotivated.

Lecturers were then interviewed in small groups to query their perception of the learning process that took place in their classes and how their students fulfill or fail their expectations, both in terms of academic performance and attitude. What they revealed was telling:

1. Although the lecturers were aware of the concept of plagiarism, many didn't know what to do about it and how to address the issue properly. Hence, the issue could remain unaddressed all the way through a student's four-year study with the university.
2. Late arrival in class was a major issue. This happened both in classes populated by high school graduates who went straight to university and in evening classes dominated by working students.
3. Student engagement was poor. The highlight of this issue is during presentation sessions. Just like the way they plagiarized materials for their paper, students also tended to copy their PowerPoint materials from books or websites and read them word by word during their presentation session.
4. During thesis supervision, some students still needed to be closely guided about what they should research, how to elaborate on their ideas, and how to present their ideas and findings in a compelling manner.
5. None of the lecturers had formal pedagogical training under their belt. They did have expertise in their own fields, but when asked to develop their own courses some felt overwhelmed and just taught as they were taught or as the textbook of their choosing dictate what to teach and which sequence. Lecturers who weren't asked to develop their own courses most likely would inherit a course designed in that manner by another lecturer before them.

There was an interesting finding during this analysis phase that lecturers who were not tech-savvy claimed that their students had been submitting increasingly more sophisticated works in recent years. Some showed a certain degree of satisfaction that somehow their teaching had improved and despite their students' shown lack of interest in classrooms, the students could actually submit works beyond their expectations. When I inspected these "sophisticated" works, it took only a glance that these papers were completely copied from the Internet, some still bearing Google's highlights on the search phrases; videos were likewise just downloaded from YouTube; cool catch phrases taken from motivational websites instead of academic sources. It took even less effort for the students to amaze their lecturers and consequently obtain very high marks. Most A's are just a Google search away.

Thus far until the end of the analysis phase, it was concluded that there was a serious gap among students' preparedness for learning at university level, the support they needed to be able perform well as independent adults after graduation, and the support they actually received during their four-year studies with the university. The guiding question was then formulated: how can the university provide support to its students so they can see the inherent value of their education process and thrive as independent adults after graduation?

## **B. The Questions**

The issues at hand were serious and systemic. They implicate the students' future, they span beyond any single academic department, and they also require lecturers' conviction and active involvement to ensure whatever medication prescribed would actually be administered. Were they to be addressed effectively, these issues must be approached strategically and systemically. However, higher education institution is a place where many people take pride in their independence, both in action and in thoughts. A top-down instruction to change the way lecturers teach just won't make the cut with faculty members. Not to mention issues of seniority, tenure, and technophobia – or simply complacency.

In retrospect, one feature of this project that helped me warp ahead was the limited time and resources allotted from analysis phase until the rubber should hit the road in the form of courses ready to be deployed university-wide within one semester. These courses represent 10 compulsory credit units out of 146 credit units students must enroll to for a bachelor degree. Considering these constraints, there wasn't much time to make ultra-deep studies. The focus was on making strategic, impactful changes with feasible results. Once this is decided, these questions surfaced that need to be addressed:

1. What skills are needed to make this curriculum overhaul happen?
2. Who should be involved and what contribution would they make?
3. How to empower those who need to be involved but lack the proper skills to contribute?
4. How to do it in the available time constraint?

We will now address these questions one at a time.

## **C. Answering the Questions**

### **1. What skills are needed to make this curriculum overhaul happen?**

To make the necessary changes take place, I decided that the people involved need to understand the ADDIE framework: analyze, design, develop, implement, and evaluate. Then, depending on which step they will be involved in, they need to master concepts and techniques such as instructional analysis, bloom's taxonomy, higher- and lower-order thinking skills, as well as the technicalities of curriculum documents such as defining learning outcomes, drafting a syllabus, crafting lesson plans. To ensure meaningful learning takes place, the assessment must accordingly be knitted in an integrated manner to the whole curriculum. We used Grant Wiggins and Jay McTighe's *Understanding by Design* (UbD) as our assessment framework.

The incorporation of UbD framework has multiple benefits. Not only did it provide an accountable backbone to the curriculum structure, it also forced these newbie-lecturers-cum-curriculum-designers to think systemically, in the words of Stephen Covey, beginning "with the end in mind". For UbD to be incorporated, they needed to have conviction of the change needed and the skills our students would need to survive as independent adults and thrive. These being said, the skills needed by people involved would fall under two categories, i.e. their own subject mastery and curriculum development skills.

### **2. Who should be involved and what contribution would they make?**

In an ideal world, we would have a team of curriculum designers who would develop these curriculum documents, working in tandem with content masters who then would supply the contents. However, the time and resource constraints wouldn't allow that to happen. We couldn't hire a bunch of consultants and experts. What we had was a group of lecturers, some of whom were dedicated lecturers willing to grow this university and contribute what they

had. Many were reluctant, dragging their feet to see, “What does this boy want to do ... I’ve been teaching here twice his age!”

Nevertheless, getting a wide ground of buy-in is essential for this curriculum overhaul to happen. The risk of not getting buy-in will be producing the curriculum the university and its students need, but seeing it kept intact as a memento of a past idealism spurt since no lecturer would want to use it later on. Hence, choosing who should be involved was made based on both political and skills considerations. All lecturers who wanted to get involved were warmly welcome, as well as deans and key figures in the academia.

When we considered the skills gap, though, we realized that these lecturers may be aware of terms like syllabus and lesson plan, but they perceived it as a particular type of form they had to fill in, not really sure of the why behind it and how it can be done another way. They just had awareness as users. With this consideration in mind, we decided people would not be divided by tasks. We’d work together as a team, and only during stages where we need subject-specific / course-specific expertise to be employed will we work separately either in smaller groups or as individuals, but the whole plan was to attack this task as one big team. In the end, we got a working team of 6. Not many, but these include those willing to learn and also capable of influencing the greater number of lecturers.

### **3. How to empower those who need to be involved but lack the proper skills to contribute?**

The lecturers involved had expertise in their subject area, but none in instructional area. Time constraints were serious. Time was ticking. Out of one semester, the first month was already used up until this stage. The needs have already been defined: instructional analysis, bloom’s taxonomy, higher- and lower-order thinking skills, the why behind curriculum documents, and UbD framework. So, how can they be developed professionally? We need them not only to master the concept but also to produce something out of this new knowledge they gain – not merely dummy products, but products that must actually be used in the coming semester.

Considering the constraints, this effort must be integrated into daily activities in campus, knitted together, instead of done as “extra activity” or outside work burden. This is a very sensitive issue. So, this is another guidepost for us back then. Purposefully, any hint of “extra work” must be avoided.

On top of these needs mentioned above, we also needed to ensure that the end product of this process would stay valid and relevant for enough time after it’s finished to justify the resources used. Not only are these courses need to be updated, reorganized, and synchronized with each other to make a meaningful whole, but they also would need to address the previous curriculum’s gap in educating students to properly graduate as independent adults five years from then. It is inevitable that 21st century learning skills must be incorporated in the curriculum overhaul.

With this extra baggage to the curriculum overhaul initiative, again the big question is: with so many homework already assigned to the lecturers who are willing to take part in this project, how can we ensure they can cope with this and deliver an acceptable result? Granted, when asked about “21st century learning skills” they’ll shrug their shoulders. Need they be trained about this “21st century learning skills”? I believe this question must be answered negatively. It should come from a conviction that these skills are actually needed to function as thriving, independent adults today. They should sense it from their own lives. Not injected as a new invention from outside. That’s the way to make it compelling and authentic.

How to ensure they would integrate not only their usual subject mastery, but also 21st century learning skills? If approached using instructional skills, they may need even further training, but indeed aren’t they living in the 21st century? They have their own wins and

struggles, excitements and frustrations with how their students and other people around them show ease and proficiency with 21st century learning skills, they just need them to be labeled and reintroduced to them – this time as lecturers and curriculum designers, vis-à-vis as parents, uncles & aunties, older brothers & sisters. Surely they have uttered the sentence, “Oh, young kids these days ....” After the issue has been reframed, my job was just to lead the discussion and FGD sessions, not to provide extra training sessions for them.

#### **4. How to do it in the available time constraint?**

Out-of-work training sessions had to be crossed out as well as multiple-session workshops of any kind. What other options did we have to meet with this team for an extended time regularly so they can be (1) developed professionally and (2) entrusted with a series of tasks that can be monitored from time to time to provide accountability and quality control? Remember, that the expected outcomes were tangible products that would be used within a couple of months away. The single option surfaced quite clearly: meetings. We had meetings all the time. Why not use it for professional development as well? I redesigned faculty meetings to be all-in-one workshops. I would prepare workshop activities beforehand, usually using small colorful cartoon cuts along with multiple color crayon sets and markers, to give a sense of fun and make the sessions feel lighter.

We’d start meetings by having me introducing some seemingly random topic in a fun, easy-to-digest way. These usually involved daily topics of which everyone was familiar about but about which everyone would most likely have different opinions and preferences, like “cooking fried rice” and “changing a flat tire”. I’d ask them, “How should it be done?” We’d brainstorm, I introduced a trick around some cognitive strategies, and we worked in groups to solve the problem. After it’s done, I’d give them another round and another example to practice using that particular skill. For a third round, I’d invite them to do it again, this time on the targeted topic with instructions such as “Now, do that on the courses you’re working on.” At the end of the session, three results were obtained: the lecturers had fun (hence, it’s somehow also a team building session), they’ve got a new skill they could use, and we’ve got the curriculum documents at hand.

I found it exhilarating that these lecturers really found the meetings to be fun and engaging. They’d laugh throughout these projects, having fun revising their courses in bright color cartoons and multiple color crayons and markers. When the session ends, it was time to wrap up by introducing them the technical names of the skills and activities they’d learned during the meeting. Then, I’d wrap up the session, give them homework and a deadline so I get to check how they’re doing just in time for the next meeting during which I’d introduce another topic which would bring us another step closer to our goal.

The wrap-ups usually include these two constant reminders: how what we had done would fit in the big ADDIE scheme and how they think this should be assessed. Hence, they’d always have the big picture in mind and where to put this specific puzzle piece along our journey together to learn and develop our curriculum. Whenever we came across some forms (e.g. syllabus, lesson plan), I’d encourage them to break down the forms to its elements. We’d tear them down to pieces. We’d banter about how the pieces could be redeveloped in another, better way to increase its efficacy in serving our assessment goal. Hence, I’d encourage this team to approach and reenvision the forms they had long treated as respected artifacts now as living documents with a purpose to fulfill.

When we played with the templates, the questions were very simple, “How does this form help us ensure our students learn the 21st century skills we want them to learn? What can be done better? What can be done differently?” By that, they’re encouraged to think creatively as designers, vis-à-vis as mere users. We found that sometimes the answer may be

just as simple as adding 1 column or section about skills to the existing syllabus. It's as simple as that.

In the whole scheme, my role was on orchestrating the lecturers to learn a new set of skill and use them in a productive and measurable manner.

#### **D. Results**

At the end of the allotted time, we produced 2 sets of courses, each had 4-5 courses designed for different groups of departments. More important than these courses by themselves, though, the process we went through gave birth to a new cohort of lecturers who were reborn into a new perspective of teaching. They had their calling as lecturers, but they never realized that they could do more than just imparting their knowledge and experience to their students. They never realized that they could scaffold their students' learning so their students would climb to grasp higher-order thinking skills simply by using the right question words, asking the right questions, and laying bare their demand for a certain quality level of student response.

When these lecturers had their classes in the coming semester, they viewed their students, their class sessions, and the forms they had to fill in in a different way. There was a refreshed sense of meaning injected into their activities with some lecturers, beyond of what we expected, shared with the rest of the team how she evaluated her exam questions using Bloom's taxonomy and saw the gap between what she had expected her students to achieve and the learning result she got; she then came up with a plan of her own to revisit her whole lesson plans and exam questions so her students would pass her courses with better achievements with direct usefulness to their lives as independent adults living in the 21st century.

The students felt the effect immediately on the semester these courses were implemented. At first they were curious why their lecturers would give away these weird-looking tables called scoring rubrics at the beginning of each course and why they would go through syllabi and paper writing guides in great details. Many didn't take it seriously. Until sometime around mid-term exam, when some of the first quizzes and papers were returned and some started to gain realization that they could actually "game" the assessments to get an A. They had been given the instrument to scale their efforts in advance so they could actually target what score they'd aim for! That was when things started to trickle down.

Students did struggle with the paper writing guides which outlined in great details the quality of work required from them, as well as one line in the scoring rubrics that stated in case of plagiarism, no matter how minor it seemed, they would get a zero for that particular work which involved plagiarism. However, beyond these struggles, some of the older and working students were the ones who showed appreciation and they became our change agents among the other students that this change is actually good and beneficial for them – and their future.

As lecturers gained confidence to play with their curriculum documents & forms, lesson plans, and learning activities, students were also being asked to show better responsibility and accountability of their own learning. Regardless of their unsupportive background, students were challenged to break the barriers in their lives; they were being shown that their lecturers and university administrators had faith in them, as long as they would hold to their end of the commitment in this phase of their life as university students.

#### **E. Providing the Support as an Administrator**

My involvement in this curriculum overhaul initiative evolved as the project grew. When the team approached the end of their curriculum overhaul, I switched to the role of policy maker. To address the gaps in terms of student skills, student learning experience, and academic policy there had to be new policies set in place so this new set of courses, curriculum documents, and the cohort of lecturers who had been reborn with a renewed sense of calling can thrive vis-à-vis drown or intoxicated in the old academic context. Hence, I got involved in drafting and publishing two curricular documents.

The first was scoring rubrics for three types of assignment which by default are in use unless lecturers come up with their own scoring rubric: paper, presentation, and whole-classroom discussion or debate. The second document was a writing guidelines which was applicable and to which students must state explicit compliance in every single assignment they submitted, including presentations and performances.

During the first semester this whole new approach was implemented, I found that it was important to be always ready and accessible both for lecturers and for the students these lecturers would send my way to consult on some confusing issues. It was important that I was seen available as a coach by the lecturers and a final decision maker in terms of these policies I set by the students so my present would not diminish the lecturers' authority in any way. As the semesters went by, some fine tune would be needed as lecturers gain more confidence and they would take the responsibility to develop and revise their own courses and assessment in a meaningful way. By then, the role of the administrator would be just to ensure that these updates would always be synergistic with the whole direction of the university and align well with other courses, contributing the best for the students' learning and future.

### **Conclusion**

Through this paper I have shared my thoughts and experience of conducting a curriculum overhaul which empowered a group of lecturers without prior pedagogical training. In this case, the approach taken was to introduce necessary change on a university level, updating an outdated curriculum to reflect 21st century realities. The aim was to maximize the reach of this initiative as broad and soon as possible. Meetings integrated with fun learning were used as the main avenue of in-service professional development so as to maximize lecturer engagement during the process. Upon implementation, different forms of support were required to enthruse both lecturers and students and ensure the change introduced was employed and effective.

The tangible outcomes in this process are simple and most lecturers would be very accustomed to them, such as lesson plans, scoring rubrics, and writing guidelines, but the renewed meaning injected into them are what gives them their power to bring the change needed. When the change required is big enough, it may be a good choice that administrators take charge and turn the academia to be a foretaste of a future world they anticipate their students to live in, enthruse their faculty members to be models of the future they expect their students to be. For administrators, our dashboard maybe as simple as old school scoring rubrics.