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## A Collection of Reflections on Instructional Design

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# **A Collection of Reflections on Instructional Design**

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## **ONE**

Reflections on assessments that are aligned to the cognitive levels of the learning outcomes

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The task I completed to align the assessments with the revised outcomes is as follows:

- Select the types of assessments that are aligned to the cognitive levels of the learning outcomes.

I used the following technique to align the assessments to the course outcomes:

It required the students to use procedures to solve or complete familiar or unfamiliar tasks. It also required students to determine which procedure(s) are most appropriate for a given task. In order to help the students, I used activities to help the students to learn and to practice in doing labs and performing simulations in cyber security. Such activities were aligned to one of the important types of learning outcomes such as Apply which requires the students to execute and implement. For example, the students would be given opportunities to learn how to identify strategies developed by cyber adversaries to attack networks and hosts and the countermeasures deployed to defend them and, be ready to react effectively and efficiently using the knowledge and skills gained in this course. Also, at the end of the course, the students will be able to develop and carry out the security policies to enhance the organizational security.

The main reason for me to select the chosen technique is that we should provide the students with opportunities to get ready both in theory and in practice for dealing with the issues coming up with cyber security principles and policies in the real world. Specially designed hands-on exercises and projects would be very helpful to the students. This is why it's so important for me to be able to use the selected technique to align the learning assessments to the course outcomes for the students. Also, the students will be able to have opportunities to execute and implement what they learned in cyber security and have a better understanding of the ever-changing needs for cyber security by various companies and organizations in the real world.

The next steps I would take are: 1) to keep up with the ever-changing needs for new development of information technologies for cyber security, and 2) to revise learning outcomes according to the changing needs while aligning the assessments to the course learning outcomes. Since this is an on-going teaching and learning process, I would be always willing to get myself updated for a better understanding of what would be needed in the real world and what need be provided for the students to have satisfactory learning outcomes.

## TWO

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

I used the following technique to align the assessments to the course outcomes:

For me, the following methods were used:

- Define the procedures for use, including the rules, principles, and steps.
- Define the contexts, problems, situations, or goals for which given procedures are appropriate.
- Explain the reasons that procedures work for different types of situations or goals.

For the students, the following activities were held:

- Paraphrase the procedures, principles, rules, and steps for using or applying the material.
- Practice recognizing the correct use of procedures, principles, rules, and steps with routine problems, then complex ones.
- Demonstrate the correct use of procedures, principles, rules, and steps with routine problems, then complex ones.

The methods used by me were very helpful because they not only defined what need be done in order to have satisfactory learning outcomes for the students, but also specify why and how these methods would be helpful to the students. As for the activities the students should put their efforts in, they have shown the importance for them not only to have opportunities to recognize the correct use of procedures, principles, rules, and steps with routine problems, then complex ones, but also to demonstrate the correct use of procedures, principles, rules, and steps with routine problems, then complex ones. For example, the students would be given opportunities to learn how to identify strategies developed by cyber adversaries to attack networks and hosts and the countermeasures deployed to defend them and, be ready to react effectively and efficiently using the knowledge and skills gained in this course. It was no doubt very helpful for the students to be able to have a better understanding of the critical issues related to cyber security via information technologies. For instance, the students would be given opportunities to learn how to identify strategies developed by cyber adversaries to attack networks and hosts and the countermeasures deployed to defend them and, be ready to react effectively and efficiently using the knowledge and skills gained in this course. The next steps I would take to continue aligning the activities and assignments to the course learning outcomes would be: 1) to revise the learning outcomes according to the dynamic needs of companies and organizations for better cyber security principles and strategies; and 2) to design more practical hands-on exercises and projects for the students to have more opportunities

to put theories into practice and demonstrate the correct use of procedures, principles, rules, and steps with routine and complex problems in cyber security.

### **THREE**

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

I completed the following task to review, refine, or supplement the syllabus of the above course:

- Use a checklist to verify all essential items for classroom and/or online course expectations are included.

The main reason for me to choose this technique is the importance of reviewing and refining the syllabus to make sure to always provide an enjoyable learning experience and satisfactory learning outcomes for my students. Without a checklist, there is a possibility for me to leave out some important information about the course, contents, materials, policies, resources, and outcomes. The checklist would enable me to do a much better job when reviewing and refining the syllabus, especially when I was adding some new materials, new policies, or new requirements for my students, thus helping them to meet their needs in a fast-changing educational environment.

When using a checklist for reviewing and refining the syllabus for IST215-70: Cyber Security, I paid special attention to all the important parts that a syllabus need to included. Actually, I follow the information flow in the checklist and verified that each of these items were not missing. Also, I even added an item that specifically for giving the students opportunity to gain extra credits for doing extra work. For example, I came cross some students who are proactive not only in learning the materials provided by the textbook, but also in gaining some practical experience with the Lab exercises. So, besides making sure that all the requirements and assignments and exercises were included in the syllabus, I added some additional exercises for the students to do and earn some extra credits. Also, when working on the course calendar, I paid special attention to the accuracy of the due dates for the assignments and exercises. In addition, I used the same checklist for developing a revised syllabus for an online session – it became much efficient for me to deal with all the parts and items that should be included in the syllabus.

When I presented my students with a well-designed syllabus that has all the information about the course, the students would be on the same page at the beginning, and would have a very clear idea for what kind of efforts need be put into their learning in order to have an enjoyable learning experience and satisfactory outcomes. For example, for these students wanting to put more efforts into the course, they knew there would be opportunities for them to earn some extra credit.

As for the next steps I will take to continue reviewing, refining, and supplementing my syllabus for my future courses, I would always tell my students about the history of the syllabus that has gone through various revisions in order to meet the changing needs of the profession and the students who are getting prepared for doing a satisfactory job when they get into the profession. This is very important because I want all my students begin their learning journey on the same

page in the course and then, each would put efforts into this course according to their objectives and goals for this course.

## **FOUR**

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

Create or revise a set of clear policies regarding incivility in my syllabus, focusing on the creation or revision of course documents.

Also, I focus on implementation of the following practice in a classroom or online course:

1. Work with students to create classroom norms
2. In an online environment, respond publicly and privately as appropriate.

The reasons for me to select and implement the above techniques are: 1) It's very important to include a section in my syllabus that addresses expectations for classroom civility. The issues need to be specially paid attention to are academic honesty, class attendance and participation, participation in discussions, showing respect for other students, tardiness, laptop and cell phone use, and food in class. When creating and/or revising a syllabus, define and explain and align the policies with university and department policies. 2) Working with students to create classroom norms would be very helpful for my students' better learning experience and progress. 3) It's very important for me to be well prepared to handle different disruptive or challenging behaviors in an online course environment, therefore, I would do my best to keep the students engaged in the learning process from a positive and productive learning environment. 4) Since most of these disruptive or challenging behaviors occur in the discussion forum, my response should always be two-pronged: a response to the group and a response to the individual., so that the communication between me and my students would be more effective and beneficial.

With using the selected techniques, while setting up a set of clear policies regarding incivility in my syllabus, I have provided opportunities for my students to participate in developing classroom norms for building up an active learning environment. I would work with my students in the first session to come up with some practical guidance and rules for my students to follow, thus helping the students collaboratively create community norms and guidelines that are more personal and specific to the course. The impact of using these techniques on improving student learning experience is obvious. For example, I observed some students making improvements on their behavior in class by following the classroom norms, thus helping to develop a positive and productive learning environment. In addition, I have observed some students becoming more and more positive and active in their learning after I continuously emphasized the importance of adhering to the class policies, obeying the class rules and following classroom norm. Finally, students showed their appreciations when I put my efforts on handling various types of disruptive or challenging behaviors in an online course environment. I always paid special attentions to handle the responses to my students' behaviors both publicly and privately as appropriate.

I plan to continue to use these techniques and make adjustments to them according to the different needs of different students in both face-to-face and online courses. For example, I could develop and keep a set of clear policies regarding incivility in my syllabus for both face-to-face and online courses. I also could improve myself in dealing with various types of disruptive or challenging behaviors in an online environment as well as in-class course. In these ways, I will be able to provide my students with a better learning experience.

## FIVE

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The techniques I am most interested in and have implemented are as follows:

1. Create a supportive classroom environment
  - Talk with students before and after class
  - Ask students to state their name when asking questions and use their name when you respond
  - Have students introduce themselves to one or two students sitting nearby
  
2. Communicate your confidence in students' ability to learn
  - Share my belief in students' ability to learn and my willingness to support them
  - Encourage students to attend office or virtual office hours
    - a. a description of the successes and/or challenges you encountered and why you think those successes and/or challenges took place.
    - b. a description of how the technique impacted student learning and/or engagement.
    - c. your plan to continue to use and/or make adjustments to the technique.

The reasons for me to select and implement the above techniques are: 1) A supportive learning environment in and out of the classroom would be a pre-requisite for my students' better learning experience and progress; 2) It's very important for me to help my students to build up their ability to learn via personal communication and encouragement. So, I always talk with my students before and after class, always encourage my students to make a best use of the office hours. Also, in the first session of the quarter, I always let the students to interview each other and report the results of the interview to the whole class.

With using the selected techniques, I have made it possible for my students to participate in building up an active learning environment before my teaching, during my teaching and after my teaching in the classroom. For example, I encouraged my students to know each other better via interviewing each other in the first session and using their names when they ask a question or answer a question. Also, I have observed some students becoming more and more confident in their learning because I always encouraged them with my confidence in them and my willingness to help them become more and more capable in answering questions and completing assignments. In the meantime, I also faced some challenges, such as some students were too shy to introduce themselves, to ask questions, and to answer questions in the classroom. They would rather sent emails asking for help. For those students, I also encourage them to see me during my office hours,

so that I could help them in a one-on-one manner. For them, building up confidence in learning took longer time and needs special attention.

As for the impact of these techniques on student learning and/or engagement, I would certainly point out that the encouragement coming from the instructor played a very important role in helping them to build up their confidence in learning while building up an active and supportive learning environment in and out of the classroom.

I plan to continue to use these techniques and make adjustments to them according to the different needs of different students in both face-to-face and online courses, for example, I could use online forum to provide students with supplementary discussions on difficult questions to help them have a better understanding of the course materials. In addition, I will be able to help my students in online courses by keeping virtual office hours on Blackboard.

## SIX

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

I have chosen the following two techniques to implement in a future class:

- Provide online opportunities for interaction
- Send motivational messages

The main reason for me to select these techniques are as follows:

- I have found out in my past teaching experience that if the students are well motivated in their learning, they'd proactively put more efforts into their learning both in and out of the classroom. So, I'd like to try sending motivational messages to my students both in and out of classroom, both in person and online, both in verbal and written communications. In the meantime, I'd like to provide the students with online opportunities for interaction, such as online discussion forums. The interaction could be among the students themselves, between me and the individual student or students as a whole.

I would anticipate the students will be more motivated by my motivational messages both in class and online, so that they will make the best use of the time spent both in class and online, and proactively take part in discussions both in class and online, finish the assignments well and on time, get better scores in tests and exams, and successfully finish the course not only with an excellent grade, but also with a better understanding of the course materials, as well as a solid foundation for future studies.

But, there would be some challenges, such as 1) some students would hold different opinions about my motivational messages and are still not motivated; 2) some students would not take the online opportunities for interaction because they do not think they would be more effective than in-class activities for interaction.

If I successfully combine these two techniques into both in-class and online opportunities for my students, they would be not only greatly motivated by my motivational messages, but also be provided valuable opportunities to interact with each other, and with me as well. Their learning experience will be both very effective and rewarding.

Therefore, I would like to deliver my motivational messages to my students not only in-class, but also online; not only at the beginning of the semester, but also throughout the whole semester.

## **SEVEN**

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The techniques I have chosen to implement are as follows:

- Identify students' readiness for learning
  - Review students' records before the semester
- Implement practices that support student success
  - Clearly communicate your expectations
- Implement grading practices that support student success
  - Provide multiple opportunities to earn course points
  - Provide opportunities to use feedback to improve performance

The main reasons of selecting these techniques are:

- 1) It would be more appropriate and effective for me to help the students who were not doing well in class because they were underprepared and did not know what to do.
- 2) It would be more encouraging and helpful for the underprepared students to find out their shortcomings and become more proactive in the learning and improve their performance and, finally catch up with the course work and be successful as other students in the class.

With the above techniques, I was able to help more students who were in need of help but did not know where to ask for and get help. For example, I clearly stated my expectations for those students who were underprepared before I provided multiple opportunities for them to earn extra points and/or bonus points if they were willing to put more efforts into their learning. Also, I always encouraged my students to proactively utilize my feedback to improve their performance in both in-class activities such as discussions and in out of the classroom activities such as projects and assignments. The impact of these techniques on the students' learning and/or engagement was two-fold: 1) my expectation for the students' improvement on their performances in active learning would be supported by these techniques; 2) the enhancement of the students learning experience would be promoted to a higher level of practices that support student success through the joint efforts from me and these students who are in need of help.

I have chosen to implement the selected techniques in both in-class courses and online courses. When implementing these techniques, I would always pay extra attention and give a special consideration to the various needs of the underprepared students to help them succeed.

## EIGHT

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The techniques I have chosen to implement are as follows:

- Increase intrinsic motivation
  - Offer specific and timely feedback
- Demonstrate the connection between increased effort and improved performance
  - Praise students for effort as opposed to natural ability
  - Offer specific praise connected to effort

The main reasons of selecting these techniques are:

- 3) It is very important for me to help the students by motivating them with timely and specific feedback on their performances in meeting the requirements of the course. When the students were specifically told about their deficiencies and shortcomings in homework, assignments, tests and exams, they would be able to put more efforts to them.
- 4) Also, it would be more appropriately for me to help the underperformed students with praise (rather than criticism) to validate their efforts they put into their studies. At this time, the students need more encouragements to be assured their efforts were worth making. Therefore, they would become more and more motivated in the learning and improve their performance with increased efforts and, finally be as successful as other students in the class.

With the above techniques, I was able to help more students who were lagging behind and in need of more encouragement via my feedback. For example, after each assignment and test, and even the mid-term exam, I would identify these students who did not do well despite their efforts. I would specifically give my analysis on their performances in the assignment or test or mid-term exam, and point out where they need put more efforts and where they need keep up the good work. In the meantime, I would give specific praise to their specific effort. Therefore, they knew exactly where to put more effort to improve their studies and performances. Also, I have found out that the more praise I gave to my students, the more efforts my students would put into their studies, and the more efforts were given, the better performances the students would have. Such outcomes have shown that there was a connection between increased efforts and improved performances. In this way, my students were always encouraged to proactively utilize my feedback to increase their efforts to improve their performance in assignments, tests, and mid-term exam. The impact of these techniques on the students' learning and/or engagement was two-fold: 1) my expectation for the students' improvement on their performances in active learning would be supported by giving the students my praise and feedback; 2) the improvement of the students' performances through their increased efforts motivated by my specific and timely feedback and praise. Such an interconnected learning experience would be promoted to a higher level of practice through the joint efforts from me with my feedback and praise and these students with their increased efforts and improved performances.

I have chosen to implement the selected techniques in both in-class courses and online courses. When implementing these techniques, I would always pay specific attention and give specific feedback and praise to specific students to help them improve their performances in their learning.

## NINE

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The technique I have chosen is as follows:

- Instructional Design
  - Ensure your curriculum and/or syllabus set the tone for diversity and inclusion

In this instructional design, I have the following two tasks to complete:

- Review the course to ensure it is representative of diverse students and sensitive to a diverse society.
- Use a planning guide to analyze and revise the syllabus for one of my courses.

The main reasons of selecting the technique are:

- It is very important for me to set the tone for diversity and inclusion in the syllabus for the courses I am teaching, because they are very helpful for my students to have a better understanding of diversity for the educational process.
- It would be more appropriately for me to review and revise a course to ensure it is representative of diverse students and sensitive to a diverse society.

After I have reviewed the course, I have revised the syllabus as follows:

A diversity statement is added. This statement explains why diversity and inclusion are important to the educational process in general and the course specifically helps my students to understand the importance and relevance of diversity and inclusion for the educational process.

Policies that address the needs and concerns of all of our students are included. Some examples of these students are as follows:

- Students with disabilities
- Students who have mental health issues
- Students who celebrate non-Christian holidays
- Transgender students
- Students with financial challenges
- First-generation college students

The impact I expect these revisions will have on my students is two-fold as follows:

- 1) It is necessary to provide the information in the syllabus that supports students from different identity groups and to communicate to them that the instructor is aware of and care for them.
- 2) It is important to try to address the concerns of all students who may need additional support by providing them with relevant information and resources in the syllabus.

I plan to share my syllabus with the students in both of in-class courses and online courses. Also, it might be worth doing to share them in hybrid courses.

## **TEN**

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The techniques I plan to implement are as follows:

1. Plan for the effective use of active learning techniques
  - Share the aim and rationale
  - Debrief with students
2. Choose and implement classroom or online techniques aligned to your learning objective
  - Use Think-Pair-Share for discussion and thought

The reasons for selecting the above techniques are: 1) It is very important to fully engage with the students from the beginning of the class by sharing my aim and rationale for the active learning strategies. When the students have the opportunity to know my teaching plan at the beginning, they would be well-informed of what would happen and what would be expected and what need be done. 2) Also, to debrief with the students is also very important, because it would keep an open communication with the students and they would be able to timely update their learning objectives and techniques. 3) Along with our learning objectives, the above techniques would work well with the application of Think-Pair-Share for discussion and thoughts in helping the students to continue their engagement in active learning. During the lecture, I also need to pay more attention to keep the students interested in and focused on the topics in the lecture. So, the techniques I have chosen would be very useful and helpful.

With using the techniques, I would anticipate the students would be much more actively encouraged in their participation in the discussions and activities from the beginning to the end. One major reason is that the students clearly know what to do in order to achieve satisfactory outcomes through the active learning process. Although I would anticipate some challenges coming from some students that would not pay a close attention at the beginning when I share the aim and rational with the class. For these students, debriefing with them would be helpful and very much necessary for continuously improving activities. So, I need to make some special efforts in order to help them.

As for the impact of these techniques on student learning and/or engagement, I would certainly expect the effective use of active learning techniques would work and be helpful to get the students involved and engaged more and more in class discussions and activities.

I plan to implement the selected techniques in both face-to-face and online courses, for example, I could spend a few minutes to address my aim and rationale to the students at the beginning of the lecture and the online session, thus helping them to have a better understanding of the course content, and have better participation in the active learning in both face-to-face and online classes. In addition, I will be able to keep the students engaged in active learning by using Think-Pair-Share to engage students in thoughtful discussion of course materials. This should be helpful to align our learning objectives to both of in-classroom or online techniques.

## **ELEVEN**

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The techniques I have chosen to implement are as follows:

1. Provide effective directions
  - Explain the purpose of the activity or assignment
2. Create a learning road map for complex content
  - Ensure vocabulary is accessible
3. Ensure comprehension
  - Integrate visuals (diagrams, videos, pictures, etc.)

The reasons for selecting the above techniques are: 1) It is very important to give the students a very clear explanation about the purpose and objectives of the assignment and/or activity. This would help the students to have a very clear idea about what need to do in order to satisfactorily finish the activity and/or assignment. Otherwise, the students would be at a loss and did not know what to do about and how to do with the activity and/or assignment. 2) It is also very important to provide the students with a learning road map that is easy to understand and follow, thus helping them to better understand the complex content in their learning. When doing so, make sure to use the words and phrases that could be easily accessible and easy to understand and follow. 3) Along with the above techniques, it is better to utilize other visual aids such as diagrams, pictures, and/or videos to help the students to understand and comprehend the complex and difficult content. Finally, the above techniques would work well with each other in helping the students to continue their engagement in activities and assignments with an active learning attitude. Therefore, the techniques I have chosen to implement would be very useful and helpful.

With using the techniques, I observed my students had a better understanding of the purpose and objectives of the activities and assignments, with a better comprehension of the content introduced in their learning process, thus becoming more confident in their participation in the activities and assignment from the beginning to the end. Despite all my efforts of combining these techniques in my teaching, I came across some challenges from some students that would not pay a close attention at the beginning when I explain the purpose of the activity or assignment with the directions to the class. Also, I would have some students with difficulties in understanding and comprehending the complex content introduced in class. For these students, providing them with a learning road map and accessible vocabulary with some visuals such as diagrams and pictures would be necessary and helpful.

As for the impact of these techniques on student learning and/or engagement, I would certainly expect the effective use of these techniques would work and be helpful to get the students involved and engaged more and more in active learning. And, such special efforts integrated to the chosen techniques would be very much appreciated by the students.

I have chosen to implement the selected techniques in both face-to-face and online courses, for example, I could clearly explain the purpose and directions to the students before assigning the activity and/or assignment in both in-class lecture and online session, thus helping them to have a better understanding of the content, and have a better participation in the active learning in both face-to-face and online classes. This should be helpful to align our learning objectives with the chosen techniques in both in-classroom or online classes.

## TWELVE

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The techniques I have chosen to implement are as follows:

Help students plan their approach to assignments

- Use examples of prior student work
  - Provide students with opportunities to self-assess their work and process
- Use checklists and rubrics to facilitate self-and peer assessments
  - Build student understanding about their learning strengths and preferences
- Provide opportunities for students to practice decision-making

The reasons for me to select the above techniques are: 1) During my teaching practice, I have noticed that some students need help when they plan to do the assignments. Partially, it's due to the fact that those students did not know where to begin with. So, it would be necessary for me to help them and one of the strategies was to use examples of assignments done by other students before the class. In this way, these students would have a better understanding of the assignments as well as building up their confidences in doing the assignments; 2) For these students who have made some progress but still not sure how much progress they had made, it's very important for me to give them help with self-assessments as well as peer-assessments. Usually, there would be a checklist for them to go over both individually and/or in pairs/groups. In this way, they would not only have learned how to self-evaluate but also how to peer-evaluate their own or others' work and progress; and 3) The above actions would provide very practical opportunities for my students to build up their ability in dealing with various decision-making situations, such as how to find out their strengths in doing certain assignments and how to discover their weakness in the process of self-assessments and peer-assessments. In a larger sense, these students would not only have a better self-esteem in active learning, but also have a better understanding of their abilities in dealing with various type of situations that would be crucial for them to practice what they had learned from the textbook and in classroom. Finally, in an even larger sense, these techniques would help me and my students to have a much better understanding on how to work together for a better learning experience and more satisfactory learning outcomes.

Despite all my efforts of helping the student with the above techniques, I would still come across some challenges from some students that did not make the progress they expected and be further discouraged in their learning. For these students, I would like to use the following growth mindset items to help them to become better self-directed learners:

1. sending them messages of encouragement and support more often.
2. using learning cues to help them with developing a positive growth mindset
3. using structured assignments to help them to build up confidence in learning

As for the impact of these techniques, I would expect my students would have better learning experience in building up their confidence in doing assignments as well as assessments for their work and progress. I would also apply these techniques in both of my in-class teaching and online teaching.

### **THIRTEEN**

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

I select the following techniques to analyze and refine my grading system or grading policies:

- A norm-referenced/standards-referenced grading system aligned with my teaching philosophy

Also, I set up the grading policies clearly to ensure accuracy, consistency, and learning value.

The main reason for me to select a norm-referenced/standards-referenced grading system is two-fold: 1) it's a commonly used grading system that puts emphasis on the learning standards to guide the teaching and learning of what should be taught and assessed in classrooms; 2) such a grading system is aligned with one of my teaching philosophies: learn from each other.

My teaching experience has shown that using a norm-referenced/standards-referenced grading system is very helpful to me and my student as well. Throughout the teaching and learning, the students are provided with relevant opportunities in the form of assignments, exercises, discussions, projects, quizzes, tests, etc., to master what they should understand and practice within each content area and knowledge base. Then, their performances will be assessed and evaluated for the learning outcomes. Since I have been using this grading system for a long time, I have found it very useful and helpful for both me and my students. As long as I have prepared a transparent syllabus for the course and the students, and as long as I have set up the grading policy straight forward in the syllabus, a norm-referenced/standards-referenced grading system would be proper and handy for me to use. For example, I could change the weight assigned to each component in the course requirements according to the subject area as well as the learning objectives. Also, my teaching experience tells that it's very important to align the grading system with clearly stated grading policies that ensure accuracy, consistency, and learning outcomes.

The next step I will take to continue aligning course assessments to my course learning outcomes would be apply a norm-referenced/standards-referenced grading system to the teaching of hybrid course or online course. It would be very helpful for me to learn more techniques when revising the syllabus with different emphasis on the course requirements and learning outcomes. I plan to share my experience in using a norm-referenced/standards-referenced grading system in both in-class teaching and hybrid/online teaching with my students.

## FOURTEEN

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

I selected the following technique:

- Create a checklist for a course assignment.

This assignment is designed for IST275-70: Information Networking and Security. In this assignment, students are asked to write a short proposal for designing a computer network for an organization.

The checklist for this assignment is as follows:

- Course information.
- Executive summary.
- Introduction.
- Network operating system. Give your reasons.
- Topologies. Give your justifications.
- Equipment and media types. Give your reasons.
- Protocols. Give your justifications.
- Changes need be made for this computer network. Give your reasons.
- Estimated and itemized cost for this computer network. Justify your budget.
- The top five issues that affected your decision making. Briefly discuss each of them.
- A detailed diagram for this computer network design.
- References.

The major reason for me to select the technique of checklist is its importance in helping me to have a clear and straight forward communication with my students about “the required elements for an assignment and raise student awareness of these elements, especially in a complex task” (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). Also, it would allow me to help my students with a better understanding of the requirements of the assignment. Without such a checklist, the students would have a hard time to figure out what the required elements are for the assignment.

When creating this checklist, I had an opportunity to go over the assignment multiple times in order to come up with a clearly stated checklist that would be very helpful to my students. What I had learned in this process is to provide various types of help for my students for their learning outcomes, and providing a checklist is one of them. Its impact on the students’ learning experience and learning outcomes should be obvious and enormous, thus enabling me to give my students a well-designed assignment.

I will take the following steps to continue to work on improving the checklist:

- Emphasizing the importance of following the checklist when doing the assignment
- Getting the feedback from the students to see whether they have found the checklist helpful
- Collecting data about how the students used the checklist as the guideline to finish the assignment satisfactorily
- Revising the checklist based on the feedback from the students and the data collected about the checklist usage.

## **FIFTEEN**

The course I have selected is IST215-70: Cyber Security that I am currently teaching.

The teaching practices I will be implementing are as follows:

- Consult with colleagues, administrators, and/or faculty development specialists.
- Document your teaching practices and insights in a teaching journal.

Also, I will be implementing a technique to secure mid-semester feedback from students by asking them to fill out a pre-designed form to obtain their feedback on lectures, discussions, quizzes and assignments, etc.

The main reason of implementing the above techniques is to find out the efficiency of my teaching instructions and usefulness of the class activities, and effectiveness of the quizzes and assignments, thus being able to adjust my teaching instructions and course activities in order to meet student needs in the second half of the class.

Taking the assignments and quizzes for example. I need to find out the right frequency of giving assignments and quizzes, so that I will not burden the students with too many assignments and quizzes. My consultations with my colleagues and faculty development specialists will allow me to have examples to follow, the feedback from my students will provide me with first-hand information on the effectiveness of assignments and quizzes to reveal: 1) if too many or too few assignments or quizzes were given; 2) if too difficult or too easy the assignments or quizzes were. Thus, I would be able to adjust the frequency and difficulty of the assignment and quizzes for my students in the second half of the class.

The impact of these techniques on the students' learning and/or engagement is two-fold: 1) my consultation with colleagues and faculty development specialists and/or administrators, together with the students' feedback could be very valuable in helping me to improve and refine my teaching; 2) my instructional activities and teaching practices as well as insights will be documented in a teaching journal together with the feedback from the students.

I will be implementing the selected techniques in my in-class courses. Also, it might be worth doing to implement them in hybrid courses. When implementing the techniques, I need to take into consideration of the different feedback from different students and, different perspectives provided by different colleagues and faculty development specialists.