Changing Pedagogy for Modern Learners – Lessons from an Educator’s Journey of Self-Reflection

Terry Taylor
School of Computing and Information Systems, Faculty of Science and Technology, Athabasca University, Canada // terryta@athabascau.ca

ABSTRACT
This paper describes the progressive development of some of my current attitudes, beliefs and methods in education, specifically how I believe the modern learner differs from the learner imagined in traditional teaching models. It further explores some ideas and real world attempts to better serve the needs of the modern learner by emphasizing process rather than content.

Keywords
Case study, Evolution in education, Interactive technologies, Reflection

Introduction
I was born in 1952, and as a consequence of that circumstance, my education was a traditional one. In grade school we were taught to write in our notebooks on alternate lines to facilitate corrections. We re-copied endlessly in the ultimately hopeless pursuit of some kind of perfection…in grammar, in punctuation, in the very form of the letters. We drew endless spiral tunnels to perfect the curvature of our penmanship.

Math was done with a stubby pencil on a much erased piece of paper, or, worse, on a dusty blackboard under the watchful eye and ever present yardstick of Mr Buleski, who paid out in brisk taps to the anatomy for every error, chiding and deriding the feckless un-prepared, or simply confused child.

We learned by rote, by repetition, by memory, by recitation in lockstep. Research was dusty library books, through which I could often be found flipping madly, looking for anything that might be remotely relevant to the topic at hand, sweating out paragraphs, themes, essays and term papers. In composition, the ‘outline’ was a straitjacket to any creativity that may have tried to express itself, placing us on a narrative path as straight and unyielding as a railroad track. Linearity was all.

Throughout my school and university education, nothing much changed. The teachers grew less inclined to strike us as we grew older and as educational thought slowly evolved away from the use of fear as a motivator. I sat in huge lecture halls instead of small classrooms, but the pedantic drone of the lecture, the rigidity of the curriculum and the mind numbing absence of creativity, imagination or vision never changed. The night before a final would find me applying my considerable ability to memorize facts to some purpose which even then, and even more so in retrospect, seemed breathtakingly pointless. Memorize the Latin and common names of the fishes of Alberta and their distinguishing characteristics, attend the exam on two cups of coffee and no sleep, regurgitate the mental meal of the previous night like the winner of a pie eating contest, then set about forgetting the whole experience.

Learning was not dynamic, it was not interactive, it was not intuitive and it was certainly not in any way self-directed.

When I finished my undergraduate degree and commenced my studies in Education, I began to learn about the methods and values of the profession from the other side. Looking back, it seems to me that what we were mostly taught was how to manipulate learners, how to lead the horse to water and then shove the hose down his throat and start pumping in the H2O. Never mind if the horse was thirsty, never mind if perhaps he may have preferred a nice Chablis, or a cup of tea.

It wouldn’t be until 1979 that I would first hear the epic words “We don’t need no education, we don’t need no thought control. No dark sarcasm in the classroom, teacher, leave those kids alone” (Waters, 1979), but as I left High School and entered University in 1970, students and other young people on campuses and on the streets all over North America, and in Europe, had begun to question the most fundamental political, economic, cultural and moral
assumptions of their parent’s generation. Also around that time, the first hints of what was to come in the future of computer technology began to appear.

Bills had already been turning up in the form of punch cards for a few years at that time, (do not fold, spindle or mutilate!) but computers were still mostly only found in the back rooms of large corporations and government agencies.

Then, one memorable day, I saw “Pong” for the first time.

In one sense it was just incredibly bad television. The little square bounced back and forth like a ball on a tennis court, the white ‘paddles’ moved up and down, blocking and returning the “ball”, or not (SCORE!). Just watching this would of course hold little interest…but…..you could control the paddles. You could alter their size, and the speed of the ball. In other words, it was interactive, and that, though I may have only dimly grasped it at the time, changed everything.

Not long afterwards I had my first teaching job in a rural elementary school, and my first hobby computer, a Texas Instruments TI-99, with 16 K of RAM. It connected to the television, and stored data in analog on a portable cassette tape recorder. By assiduously copying two or three pages of BASIC from the pages of a hobbyist magazine, I could make a tiny stick man walk back and forth on the screen…take that, Pong!!!

In my elementary school classroom I strove not to be Mr Buleski. I wished to find and develop in each of my students the unique talents and interests I knew they all possessed. Since I was dealing with a split grade class (this was a 4 room K-9 school), I had to juggle two lessons at once (give this group some busy work, teach the other group for a while, switch).

It occurred to me that I should develop “learning stations”, areas in the classroom where activities and resources for a certain subject could be arrayed, and among which students could move somewhat freely, within certain constraints aimed at ensuring that each did an acceptable amount of each of the subjects deemed appropriate by our curriculum.

Instead of 25 students sitting in neat rows, reciting in unison, listening in stuporous boredom, or performing repetitive individual drills, I had small knots of students clustered at 8 or 10 learning stations about the edges of the room. I encouraged students to place their desks where they wanted…in a group with their friends, or off by themselves as they preferred. I had a large library table near the blackboard for those occasions when I wanted a group of any size to attend to something I wanted to tell or show them.

My principal, perhaps twice my age and a product of the English public school system, was dismayed and not particularly supportive, but, much to my surprise, a somewhat forward thinking curriculum specialist from the County not only defended but actually encouraged me in this approach, providing learning resources that worked well for individualized learning, and referring me to sources on “modern” educational thought which validated what I was trying to do.

The kids LOVED it. Kids in other classes were envious. Parents, after the predictable rural skepticism about anything new-fangled, realized their kids were ENJOYING school and also became supportive.

I would like to say that I continued this approach throughout my 6 years of teaching in the public system, but the sad truth is, I eventually burned out on the huge extra workload the system created for me and went back to more conventional approaches, though I think I can say with some pride that I never did become Mr Buleski.

I left teaching in 1980 to pursue other interests…first music, and then, when faced with the realization that I was not prepared to spend my life in vans, converted school busses, bars and hotel rooms……computers.

It was while working as a customer support person for one of my cities first consumer computer stores that I became involved in working with PCs for achieving practical goals (i.e., something beyond making a little stick man walk back and forth on the screen), and suddenly found myself teaching again, only this time I was teaching adults how to use these exciting and powerful new tools.
These learners were self-motivated; they were, in the parlance of the time “turned on”. Their individual backgrounds,
needs and goals in learning were unique and varied and it seemed like new tools and applications were being
developed daily. Around that time I read “The Third Wave,” and I realized that, as Pong had promised 10 years
earlier, everything had indeed changed.

The chainsaw analogy

By 1983 found myself back in an actual classroom, with adults this time, working in a small college, and teaching,
among other things, computer applications and what we then called ‘computer literacy.’

One day during my first term I happened to come upon a young woman working on a term paper, using a word-
processing program as I had encouraged my students to do when writing for other courses. Beside her keyboard lay a
sheaf of pages, which I realized were her corrected final draft….handwritten.

My mind flashed back to the Language Arts notebooks of my youth, with the writing on every second line and the
corrections and additions on the alternate lines, and to the painful experience of re-copying, sometimes repeatedly, to
get that perfect final draft, and I had at that moment what can only be adequately described as an epiphany.

I had grievously failed this young woman, and my other students. I had shown them the features, and demonstrated
which buttons to press, but I had failed to explain the basic POINT.

Sometime later I would use the analogy of an old-school lumberjack given a chainsaw to replace his axe. If all you
told him was that he could cut down 20 times as many trees with this tool, he might not at first succeed. Only when
he discovered, or was told, that you had to pull the starter cord first would he begin to get the results the tool was
capable of delivering.

Out of that came a growing awareness that I had to not only teach my students the mechanics of using the new
software tools, I had to also get them to think and work in different ways.

I began to introduce Word Processing to students by telling them that, first and foremost, they had to change the way
they approached the task of writing.

No more writing on the alternate lines, so to speak.

As I refined my understanding of what made writing with a computer different I began to see that the real power of
the word processor lay in the fact that it allowed us to separate the mechanical and cosmetic aspects of writing from
the creative, to treat them, as they rightly should be, as two basically unrelated processes.

Let us visit, one last time, that 8 or 9 year old writing his theme in a classroom in 1960. He does not want to be doing
this. He would rather be on the playground. He is not gifted with naturally tidy handwriting, so the production of
something legible is a challenge. He is thinking about punctuation. He is thinking about grammar, and spelling. He is
slavishly following a corrected rough draft on the adjacent page of the notebook. The draft was itself written by
slavishly following a printed outline. This is the third, or possibly the fourth time he has written this piece.

He does NOT wish to write it again.

Is this young writer’s creative fire stoked up? Is he writing from his heart, from his soul, or even from his brain? If he
has a sudden inspiration, will he risk all to alter the content of his composition?

Of course the answer to all the above is “No.”

Back in 1983, I began to ask my students to consciously attempt to separate the creative process from the rest of the
job of writing. I encouraged them to try and free themselves from the notion that they had to start at the beginning
and end at the end. I told them not to worry about grammar, punctuation or spelling, or even about the logical
sequence of ideas that would make the final version of their composition flow smoothly. I forbade them to develop handwritten outlines or drafts and transcribe those to the computer.

“Write as if you were talking to a friend,” I told them. As fast as the ideas come, let them out onto the screen. Deal with the rest…the mechanics, the cosmetics…later.

Years later I would hear the term “living document’ applied to what one is working with in a Word Processing program, and wished I had thought of that!

**What makes modern learners different?**

Over time, and as people’s life experience with computer technology became greater, each succeeding generation became more intuitive about the way computers can be used. My children literally grew up with computers and computer games. They think differently than I did as a young person. They multi-task, they are non-linear, they value concepts over data (data they take for granted…it’s everywhere). Learning for them does not mean acquiring facts, it means acquiring insight. They don’t need to KNOW, they need to UNDERSTAND.

Since an increasing number of activities and occupations are heavily dependent upon technology, which is itself changing rapidly, “facts” are, at best, a steadily devaluing currency …in many disciplines, today’s ‘facts’ are obsolete and irrelevant tomorrow.

I remember suggesting to a Historian once that he was lucky to work in a discipline where the base of knowledge was not constantly shifting under his feet, as it does for those of us in fields like Information Technology (IT) or Computer Science (CS). He was quick to disagree, pointing out quite convincingly that his area of interest was also dramatically affected by changing technology, and that even the presumed ‘facts’ of historical occurrences are not, as we say, carved in stone, even those which may literally and actually be carved in stone.

Access to information has changed dramatically as well. Ask me any question, anytime, anywhere, and all I need to do is pull out my smartphone, which is really a tiny, mobile computer directly connected to the largest repository of human knowledge ever to exist, and I can, in seconds, give you a detailed and likely quite reliable answer. Not all information on the Internet is accurate of course, but being able to check a variety of sources in a very short time means we have a pretty good shot at finding valid answer to almost any question.

For example, the answer to the question “What is the meaning of life, the universe and everything?” is, as we all now know, “42.”

Levity aside, it is undeniable that access to facts no longer means cramming them into our brains. In the world we live in, the ability to find information, to evaluate it, to synthesize, process, interpret, document and communicate it, have become the relevant qualities of a successful individual.

Today’s learners are trying to prepare themselves for a future that is not at all clearly seen. The pace of change is such that doctrine has little value and adaptability is the key quality for success.

Today’s learner demands relevance, and expects innovation, flexibility and the opportunity to develop those skills that will give them the ability to adapt, to learn independently (for learning is now, more than ever, a lifelong process), and to collaborate effectively.

To properly serve today’s learner, educators must facilitate, empower and support, and institutions must create open and flexible learning environments.

Technology has both driven and enabled these changes, and, just as we learned to write differently (and arguably much better) by using word processing software effectively, we are also learning to teach and learn differently as we gain insight into the true power of the tools technology provides.
An example of the new pedagogy applied

In the late 1980s I began teaching introductory computer courses at a small Native college program operated by the Yellowhead Tribal Council, a program which has since grown into Edmonton’s only First Nations College, the Yellowhead Tribal College, with which I continue to maintain a relationship to this day. The courses were from Athabasca University, and over time I began doing more and more seminar instruction for AU at YTC and other cooperating institutions, eventually becoming a full time Course Coordinator and Tutor in the Schools of Business and Computer Science at AU, positions I continue to hold today.

Athabasca University has been delivering courses online for many years now, but in fact one of the first AU courses to be offered online was one of my courses, COMP 200, a broad survey course which we use as in introduction to CS topics for our full-time students. I wrote the first online version of COMP 200 under the guidance of my colleague, friend and mentor Dr Peter Holt back in the early 90’s and it has been a cornerstone of our CS degree programs ever since.

In that course we experimented with the development of our own online texts, beginning around 1990 and continuing for several years in what proved to be an interesting but ultimately unworkable approach. The problem was that the maintenance of currency in such a text was an impossible task for one person to keep up with, amongst the other duties and responsibilities of my position. This was of course well before ETexts became a widely available option from publishers.

The idea of using primarily online resources instead of a conventional printed text was a compelling one however, especially as the number and quality of websites containing relevant information grew rapidly.

Publishers eventually responded to this expectation in the market and today the availability of EText versions of University texts is almost a given. For some courses and topics however, it may be difficult or impossible to find any single text that adequately covers the scope of content needed.

When I was approached to develop a new course on Interactive Technologies and Human Computer Interaction (IT and HCI), it was obvious from the start that this course would present exactly that challenge. For one thing the breadth of the topic is enormous…it touches on all aspects of HCI, which is to say most aspects of computing.

Another factor was the pace of change within the field, which was fast even by the standards by which we reckon rates of change in computer technology generally. The whole field of HCI is itself relatively new, and not even uniformly defined as yet, if indeed it ever can be.

In addition, I wanted to explore the possibilities of allowing students a degree of control that I at least had never seen given in a course before. I wanted students to be able to make choices, not only about WHAT they learned, but also about HOW they learned, and what they produced by way of evaluated deliverables.

Our goals for the new course, to be called Interactive Technologies, were to provide a broad review of all facets and elements of interactive technologies and Human Computer Interaction, under four main topic areas: the context of HCI, input and output, application interfaces and design/programming. The course was to be exploratory in nature, and designed in such a way as to ensure currency in a fast changing field. A more detailed overview of the topical content may be found in the appendix.

Every activity of course had specific learning objectives identified and stated, however, as the notion that learning should have a clear goal is one aspect of traditional pedagogy I am NOT about to abandon.

My belief was that, for this subject area at least, the learning needs of students would best be met if they were able to get a big picture view of the subject by looking at a series of specific topics in defined areas, and that exactly which specific topics they looked at did not really matter.

There would need to be parameters of course. Hearkening back to my ‘learning station’ experiment in my grade three-four split class of 1975 I decided I could use a similar evaluation system, requiring students to earn a certain number of assignment ‘points’ in each of the main topic areas I had identified for the course.
Within each general topic area I then developed as many relevant learning activities as I could think of, each involving research, analysis, interpretation or synthesis, and reporting. Some actually involved a hands-on activity such as the use of a Rapid Prototyping tool or a basic programming interface.

The choices available to students did not end with being able to pick which activities they undertook. The activities themselves were designed to be open-ended and flexible as well. For example, one activity might ask students to profile a prominent HCI developer. This gave students the opportunity to, first of all, scan the general information available online to find out who fit the bill. Already, just in the process of selecting subject for their discussion they were learning about the people who shaped the way we interact with computers. Once the subject of their exploration was chosen, they would access a variety of resources discussing that person’s work, from which they would glean not only the material for their report, but also, along the way, be exposed to information about the context of the work, who the developer collaborated with, and what the state of the specific technologies they worked on was before, and after their work.

Students were free to use whatever type of learning resources suited their own learning style….they could read, listen to online lectures, watch videos or presentations, discuss the topics in online forums or access the information in whatever form they chose. They were also free to proceed through the sections of the course in a non-linear fashion if they chose. No single topic area was ‘first’ or ‘last’ in the course, so they could start anywhere.

Flexibility and choice was also extended to the format of the material they submitted. Most of the activities could be done as an illustrated article, a PowerPoint presentation, a website, a video or an audio speech. A few, such as an activity using MIT Scratch (Scratch, n.d.) did have a prescribed format for the submission, but even there, choice existed in terms of what sort of program they built.

Evaluation was based on a certain number of possible points being available for each activity, based on the difficulty of the task. Activities were assigned ratings for difficulty levels of Easy, Moderate and Challenging. There was also a set of success levels set for the activities, allowing the person evaluating them to rate them as Basic, Complete or Exemplary.

An “Easy” activity would earn 2 to 4 point depending on the ‘grade’ the submitted material received; 2 for a Basic rating, 3 for a Complete, and 4 for an Exemplary.

A “Moderate” level activity received more points, i.e. 3, 4 or 5, and a “Challenging” activity received 4, 5 or 6.

Students were told to plan their activities so that they would be targeting a minimum of 22 points in each of the four main topic areas of the course. There were enough activities available in each topic area to complete much more than 22 points, however, and this is where the evaluation system for the course becomes quite unique.

By aiming for more than 22 points on a particular assignment, students could essentially do ‘extra credit’ work, creating a buffer that would allow for the possibility that they might fall short of their expectation in one activity (for example, earning only a “Basic” rating when they had hoped for an “Exemplary”), yet still, by virtue of having targeted extra points, wind up with full marks on the assignment overall.

Naturally, this took a fair amount of careful explanation, and some students initially did find it confusing, but we were able to refine our instructions and explanations of the system well enough so that now, as the course enters its third year of operation, we get very few requests from new students seeking help understanding the system.

With 4 major assignments, each worth a maximum of 22 point, we had distributed 88% of the course grade weight. The remaining 12% I had set aside for something else I wanted to include.

One of the things which was both a benefit and a limitation of the course design, was that students would see only what they chose to see, so I wanted to enforce a degree of interaction between the students and also facilitate them seeing what others were doing in the course.

For the final project, students were therefore required to choose several of their own completed activities, write a brief statement of the learning objective the material would attempt to achieve, and post them in a special conference.
we created in our learning management system (Moodle) for this purpose. These “Learning Objects” were then available for all other students in the course to view.

The second part of this final assignment was to choose several items from among these posted ‘Learning Objects’ and review them, which meant reading, watching or listening to the submitted item, depending on its format, and writing a review. There were some general parameters defined for the format and content of the reviews, but again, students were free to choose what they themselves posted from their own work, and also what they chose to review. The stated learning objectives for their own posts, plus their reviews of other students’ posts, were combined into a single portfolio for submission.

Given that the textbook for this course was, in a sense, the entire Internet, it was obvious from the start that there could be no exams or quizzes, for how can you make a fair exam question in a course where every student is learning a different specific body of content?

Presenting this course design to my colleagues was an interesting experience.

Here was a course with no text, no exams or quizzes, and no common body of content except in a very general sense, no uniform format for assignment submission and an evaluation system that allowed students to earn more than 100% on individual assignments (of course, marks over 22 /22 on individual assignments were not actually awarded, but, as previously mentioned this allowed students to lose marks on a specific activity and still wind up with a perfect grade on the overall assignment). To their credit, and my pleasant surprise, the other members of the Faculty were generally supportive, and the course was allowed to proceed to production as designed.

I also had some trepidation about the reaction of students, though I was fairly confident the course would be well received once students really understood what we were trying to do. Since the course opened I would have to say that it has received the most positive feedback of any course I have developed or managed. It also produces the highest grades, partly by virtue of the ‘extra credit’ aspect of the evaluation system, but also because, when faced with an open ended, rather loosely defined task, and especially one of their own choosing, students simply work harder, go further, and deliver more. They err on the side of caution, wishing to ensure that they achieve that “Exemplary” grade, but also, they are actually interested in what they are doing because they got to choose the specific focus of their activity.

Here is a selection of comments received from students as they completed the course:

“I just wanted to take the opportunity to let you know that at the beginning of the course I was quite apprehensive because of the course format. That feeling was due to the difference of other courses I have taken. I just wanted to let you know that I really enjoyed the course and the learning opportunities are endless with this format. I have learned quite a bit about HCI and not just the topics I chose for assignments. Through poking around and researching, I learned much more than any text book could have provided.”

“I just wanted to say I enjoyed the course and thank you for this type of learning opportunity.”

“This has been an ongoing "quest" since I first started the course and quite frankly Facebook groups, Pinterest and library research proved the most useful activities. Despite the forum postings on the landing that received little response I found other "social" groups and discussion areas quite satisfactory for navigating to credible resources. I often speak with several colleagues quite intimately about computer technology and those conversations are indispensable as well. Thank you for the opportunity to pursue some interesting and useful research related to HCI.”

“just wanted you to know I'm enjoying this class and have worked hard on various assignments!”

“I'm glad that you enjoyed my assignments; I had a lot of fun as well - a lot more entertaining than the operating system work and calculus I've got this semester. With luck I'll get another one of your courses, though. Thanks again!”
“I really enjoyed the course, it's well put together and I liked the hands on approach for MIT Scratch and Logo.”

“It was a rather unconventional and unusual course, but I don't think it could be done any other way.”

References


Appendix: Interactive technologies course details

Below are the topical outline and some examples of the specific activities prescribed in the course Interactive Technologies.

Outline of main topic areas

**Topic 1 - The context of human-computer interaction**  
History and Development of Computer Interfaces  
The Next Generation of Interfaces  
Ergonomics

**Topic 2 – Input and output**  
Input at the Programming Level  
Input Devices and Data Types- From Typing to Sensing  
Output – Not Just Information Anymore

**Topic 3 – Using and evaluating application interfaces**  
Windows and other desktop interfaces  
2D and 3D Interfaces

**Topic 4 – Creating user interfaces**  
Principles of Sound Interface Design  
Creating Simple HTML Web Interfaces  
Image Maps  
Using Simple Programming Tools to Design Interactive Applications or Interfaces

Course activities

The activities in the course each have specific Learning Objectives, and specific deliverables, which may be in the form of illustrated articles, PPT presentations, webpages or videos. Two of the activities have computer programs as their products, created using very simple programming interfaces.

Many activities require that the student simply research and compile information on certain specific aspects of the course Topics, others require the student to install and work with specific software tools such as gaming, programming or multimedia applications.

Activities are organized by Topic and general subtopic where appropriate. Students are required to complete a minimum number of 3 activities from each of the 4 course topics, however they may choose which specific activities in each Topic area they wish to complete.

**Topic 1 – The context of human-computer interaction**

- History and development of computer interfaces  
  1.1 - Create a timeline of computer interface technology  
  1.2 - Profile an HCI developer  
  1.3 - Man versus technology  

- The Next Generation of Interfaces  
  1.4 - Develop a presentation on emerging HCI technology  
  1.5 - Describe an 'ultimate level’ of human computer interaction

- Ergonomics  
  1.6 - Research and document an ergonomic issue in HCI
Topic 2 - Input and output

Input at the programming level
2.1 - Research and report on rapid interface design tools

Input devices and data types - from typing to sensing
2.2 - Install and test a freeware voice command/dictation program
2.3 - Describe interaction methods for a non-traditional computing device

Output – Not just information anymore
2.4 - Describe a specific computer managed manufacturing process
2.5 - Describe a large scale display system

Topic 3 - Using and evaluating application interfaces

Windows and other desktop interfaces
3.1 - Describe graphical user interfaces – windows
3.2 - Customize and adapt the windows interface

2D and 3D Interfaces
3.3 - Describe a specialized gaming interface
3.4 - Evaluate a VR interface – Google Earth
3.5 - Evaluate a VR interface – Second Life

Topic 4 - Creating user interfaces

Principles of sound interface design
4.1 - Review an article or lecture on human-computer interaction

Web interfaces
4.2 - Create a web interface for course topic explorations
4.3 - Create a web interface for image display

Image maps
4.4 - Create an intuitive image map interface

Using simple programming tools to design interactive applications or interfaces
4.5 - Learn and use a programming interface – LOGO
4.6 - Create an interactive application using MIT Scratch

Evaluation of activities

Each activity allows for a range of points, depending on the difficulty of the activity and the rating assigned by the marker. For example, simple activities may earn from 1-3 points, moderately difficult activities 3-5 point and difficult activities 4-7 points.

Only a maximum of 22 points may be scored on a given assignment, but students are free to undertake activities for more points than they can score.

Evaluation is based on the difficulty level of the activities completed, as well as on the standard achieved in the completion of the submitted activities. Each submitted activity is rated as meeting the Basic, Complete, or Exemplary standard and assigned an appropriate number of points accordingly. These standards are described below:

- **Basic Standard:** The work demonstrates a minimum response to the requirements for the activity. It includes the specified elements, but shows little or no creativity, design, or media use; minimal detail; and/or incomplete citation of sources.
- **Complete Standard:** The work demonstrates a thorough response to the requirements for the activity; some effort in design and media use; thorough detail; full citations; and effective organization.
- **Exemplary Standard:** The work demonstrates an outstanding response to the requirements of the activity. It is well organized and detailed; shows insight as well as knowledge; is creative in design and media use; and has an original or challenging topic.

Note: Activity submissions that fall below the Basic standard are returned ungraded to the student with suggestions for improvement. Students may resubmit each activity only once, after which it will be graded.