Abstract
Designing courses that are meaningful to diverse learners and still align them to the goals of a university and its general education requirements is not a mean task. This course redesign project focuses on redesigning a course that we are currently teaching and outlines the spiral-reflective process that the instructors used to conduct learner and learning needs analysis, incorporating learners’ input, and course redesign phases that were adapted from Dee Fink (2013). It also includes reflections of struggles and challenges faced by both researchers. One of the researchers is an Adjunct Instructor, and the other, a full-time Instructor in higher education. Those struggles and challenges were the major motivation behind this course redesign project. The major goal for this spiral-reflective project is advancing knowledge and providing new understanding of issues related to course design and instruction for learners from diverse backgrounds. The researchers sought to understand how to introduce non-linear approaches and a pedagogy that is integrated, using spiral and critical ways of learning into instruction within an environment of traditional Western linear methodologies of passive teaching and learning. Minority students continue to struggle to learn in higher education because the main model of instruction is based on a linear Eurocentric style of learning that does not integrate spiral or circular learning, diverse languages and codes of communication. The outcome of the study was a redesigned undergraduate college course in the African American and African Studies program at the Institute for Intercultural and Anthropological Studies.

Keywords: Critical Pedagogy, Spiral Learning, Diverse Learners, Course Redesign, Learners and Learning Assessment
Introduction and Background

Designing courses that are meaningful to learners while still aligning them with the goals of a university and its general education requirements is a broad and very daunting task. This action research paper presents lessons learned by both researchers (one Adjunct and one Full time Professor) from their respective teaching experiences. Humans learn through a circular process of action, conceptualization and evaluation, referring to previous experiences as well as anticipating outcomes (Cross, 1981; Fink, 2013). Learning is in that sense a process of spiral reflecting, moving on, and turning into a new loop with new experiences and qualitatively new challenges.

Clarification about an Instructor’s background is important in action research because what we experience as challenges might not be challenges for other instructors. Some of the struggles and challenges as it relates to delivery of learning are ever present in the classroom, and other spaces in higher education. The researchers have had students who appreciated their project-based learning but could not get over their accent, and rated them poorly because of that. Challenges faced include inner conflict at pre-course design phase, during the course design process, delivery and evaluation, including questions about how to know for sure what is meaningful to their learners and how to evaluate the whole process.

These struggles and challenges that the researchers face are not unique to them. They make suggestions and recommendations based on decades of experience, conversations with other immigrant Instructors and students, as well as observations that they believe have influenced them to design an approach to learning and instruction that supports multiple and different ways of learning. It is very important to take into consideration students’ learning styles and backgrounds when creating and facilitating integrated spiral active learning and inquiry within inclusive environments. The use of inclusive spiral pedagogy ensures enthusiastic participation of students from diverse backgrounds who have different learning and thinking styles, as well as information acquisition, processing and decision-making styles.

Research Objective

This project is an endeavor to reflect and share the experience of redesigning an online college course that demonstrates an understanding of and application of theories and content of educational and instructional technology that focus on engaging with diverse learners. This course redesigning process is supported by the science of creating meaningful and significant instructional curriculum that is geared towards producing specific learning outcomes, based not only on pedagogical research, but also on current spiral pedagogy and inclusive instructional practices.

Target Audience

The goal of the researchers is to present a paper that can benefit other Instructors, Instructional Designers in higher education, as well as academic administrators and managers globally.
Justification

Action research in education is both critical and reflective, which served the researchers ‘goal of sharing their lived experiences in classrooms (physical and virtual) that are found in predominantly Eurocentric environments. Online learning and discussion provides an opportunity for sharing of experiences amongst learners and between learners and instructors. Most online courses, however, are designed as if they were a replacement of the traditional face-to-face teacher led instruction.

Problem Statement

Most online courses that the researchers have experienced at Western Michigan University were designed as if they were substitutes of the traditional courses. The traditional one size-fits-all approach to teaching does not cater to culturally diverse groups. Minority students continue to struggle to learn in higher education because the main model of instruction is based on a linear Eurocentric style of learning that neither integrates spiral or circular learning, nor diverse languages and codes of communication.

As outlined in the introduction, the researchers’ struggles as Instructors in higher education are many. The focus of this project is the main challenges and struggles of using a non-linear approach and pedagogy that is integrated, spiral and critical while managing learning and communication issues in the classroom of learners that are predominantly and almost always surrounded by an environment that is Eurocentric and linear.

Research Questions

1. How do we introduce non-linear approaches and pedagogy that is integrated, using spiral and critical ways of learning into instruction within an environment of traditional Western linear methodologies of passive teaching and learning?

2. What is the holistic role of the instructor on the spiral process?

Literature Review

The major goal for this paper is advancing knowledge and providing new understanding of issues related to course design and instruction for learners from diverse backgrounds. The researchers are cognizant of the major goals of action research in education that include improving instruction design, delivery and the whole learning process and its environment. As this is a reflection of our experiences as Instructors in a predominantly Eurocentric environment, the literature reviewed was solely for instruction design from pre-design, design, delivery and post delivery phases as well as in the learning environment (the traditional face-to-face classroom or online) including instruction design theories, learner and learner needs.

Learning Theory and Epistemology

Professions and epistemological views almost always dictate pedagogic/andragogical approaches to learning and instruction. Since 21st century learners do not have similar
educational and or knowledge construction backgrounds, in addition to being meaning makers, the researchers design their courses in a way that ensures that the learners can access information and learning contexts anywhere, anytime. They avoid the traditional one-size-fits all learning approach, and use a design of learning that is learner-centric as much as possible. This ensures that learners feel that the content and assessment has relevance for their lives.

**Learning Styles**

The major learning styles that this section of literature review will focus on include Linear (or Modular), Cyclical (or Spiral), and Holistic. Linear seems to be the primary way of teaching and learning in Western culture and is therefore commonly used and widely recognized for designing and evaluating learning expectations and qualifications. Cyclical or Spiral, which will be the adopted design approach in this project, is the traditional method of teaching and learning in tribal and indigenous cultures around the world. Holistic is a most common way of teaching and learning in the Orient, although with Western adaptations (Fink, 2013; Knowles, 1984; 1980; 1975).

According to Knowles (1984; 1980; 1975), adult learning, or andragogy, is a process of drawing connections between what is already known or understood and new information. The researchers made the following assumptions about the design of learning and instruction for adults as presented by Knowles and further developed by Cross. They based their assumptions on social constructivist theory and andragogical approach. (1) Adults need to know why they are learning something and are motivated to learn by internal factors, (2) Adults need to learn experientially, (3) Adults approach learning as solving real world problems, and (4) Adults learn best when the topic is of immediate value (Cross, 1981; Knowles, 1984; 1980; 1975).

The researchers adapted the following process as shown in figure 1 and 2.

![Figure 1: Integrated Design (adapted from Fink, 2013).](image)

**Instructional Design Theory and Strategy**

Fink (2013), from a constructivism approach, defines instructional strategy for significant learning as a set of learning activities, arranged in a particular sequence so that the energy for learning increases and accumulates as students go through the sequence and learn from each other as they share and exchange ideas. He suggests some inter-related steps that include analyzing the situational factors, formulating learning goals, designing feedback and assessment procedures, and eventually selecting teaching/learning activities that are interlinked and looped back to the major
He asserts that “what students learn become part of how they think, what they can and want to do, what they believe is true about life, and what they value,” (p.7).

![A TAXONOMY OF SIGNIFICANT LEARNING](image)

**Figure 2:** Creating Significant Learning Experiences: An integrated Approach to Designing College Courses (Adapted from Fink, 2013).

Instructional Design is the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction and involves analysis of learner and learning needs, learning environment and context as well as learning and evaluation goals and including the development of a delivery or instruction system to meet those needs. Reiser (2002) reiterates the same as he approaches instructional design as “the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning” (p. 1).

From the literature that we just reviewed, if instructional design is the systematic process of designing, developing, evaluating and managing the entire instructional process to ensure effective and efficient learning, then what is the role of the Instructor? An Instruction Systems Designer can do all these steps as presented here. What then, is the Instructor’s role? This, along with designing courses that do take into consideration not only diverse learners’ learning styles, but also their background, prior knowledge and lived experiences are the gaps that we are trying to fill in this research.

**Researchers’ Reflection**

As accomplished Instructors, the researchers constantly reflect and assess the effectiveness of the classroom interactions with learners, specifically, what goes on in the classroom in order to either adjust or modify/redesign the teaching plans accordingly. The Instructors have been successful at working collaboratively with the learners to select methods, materials, and resources for instruction, by using mid and
end of semester course evaluations to solicit such information. The spiral-reflective process is embedded in this project at every phase of the process.

Course evaluations have become a great source of information that can be used for this process. By reflecting on and evaluating instruction and learning practices, Instructors can develop ways to change and improve the learning process and environment. The following sections focused on the design process and our reflections. The outcome of this spiral-reflective and action research is shown on Appendix 1.

**Instructional Design Process**

One major question that the researchers struggled with was how to implement the changes they felt necessary for creating significant learning for diverse learners. Flipping the classroom using an integrated spiral (non-linear strategy) model aligned with critical indigenous pedagogy and other ways of knowing and learning that is not sequential but is a continuous relational endeavor was adopted to design the sample course (appendix 1). The goal is to create significant learning experiences in a learning space/environment where student agency and critical consciousness can be fostered in a way that grows knowledge and expertise in a given subject (Fink, 2013; Reiser, and Dempsey, (Eds.) 2002).

After experimenting with Fink’s suggestions of an integrated and cyclic approach, the researchers decided to adapt his model, diagrammatically as follows (p. 74-119):

![A HOLISTIC VIEW OF ACTIVE LEARNING](image)

**Figure 3:** The 12 steps that Fink recommends to achieve an active spiral approach include:

1. Identifying important situational factors (For example, prior knowledge, characteristics of the Learners and their preferred learning styles);
2. Identifying important learning goals (For example, thinking or application abilities you want them to develop or they are interested in developing);
3. Formulating appropriate feedback and assessment procedures (For example, demonstration of achievement of the learning goals);
4. Selecting effective instructional strategy for teaching/active learning activities and rich learning experiences, in-depth reflective dialogue;
5. Making sure the primary components are integrated (consistent with all the learning goals, feedback and evaluation);
6. Creating a thematic structure for the course;
7. Selecting or creating an instructional strategy;
8. Integrating the course structure and the instructional strategy to create an overall scheme of learning activities;
9. Developing the grading system;
10. De-Bugging possible problems;
11. Write the course syllabus;
12. Planning an evaluation of the course and of your teaching;

Although the researchers used Fink’s 12 steps (above) and holistic active learning (Figure 3) because they incorporate “rich learning experiences” and “reflective dialogue,” none of them include students’ lived experiences. That becomes problematic in inclusive course design because Eurocentric curricula have traditionally excluded the experiences of people who are not White. At its core, Eurocentricity places other ways of knowing at the periphery. By doing so, it completely alienates and devalues the everyday lived experiences of minority learners. Spiral critical pedagogy allows for leveraging techniques that give voices to those groups that are most usually suppressed, excluded or oppressed as discussed earlier.

In line with spiral active learning philosophy and prioritizing collaboration, learners were involved in the design process, and their responses used as an input and as part of knowledge construction (Figures 4-6) by listening to and including learners’ knowledge and perspectives in class, making connections between school and the broader community, making connections between course content and learners’ prior knowledge and lived experiences, as well as posing problems to students that encourage them to question assumed knowledge and understandings. It acknowledges that all learning in the 21st century is a hybrid that integrates learners’ digital lives into their digitally-enhanced or fully online learning experiences (Fink, 2013; Knowles, 1980; Rahman et al, 2019).

The role of an instructor in active spiral learning is that of a facilitator. It is a common role by default and not choice, for minority Instructors to find themselves serving as role models and coaches. When facilitating face-to-face learning, it is suggested that one encourages learners to use their phones and laptops as part of the learning process, to minimize distraction because no matter how Instructors try to restrict the usage of electronic devices in the classroom, learners will always find a way to still use them. Incorporating short interludes where Instructors allow the learners to use their devices to connect with the course content, teaching them to “unlearn” some biased knowledge that is inherent in the Eurocentric worldview, encouraging community building, can be done bearing in mind that the learners’ fingers will be itching to thumb through their phones anyway. Why not incorporate learning into those new habits that are continuously becoming part of our lives? If otherwise left unattended, the learners get distracted and lost into their electronic devices and we lose most of them into activities that are unrelated to the learning activity at hand.
We believe that it is only when we bring our learners to understand that their personal experiences matter, that they can be active participants to their own education, empowered enough to critically examine their lived experiences in juxtaposition to other ways of knowing to attain a true and meaningful knowledge.

**Research Methodology: The redesign process**

**Integrated Spiral and Active Learning**

Using Fink’s argument, and augmenting it with social constructivist learning theories, critical spiral pedagogy and methodologies, it follows that teaching is a cyclic model, and learning is an upward spiral. The model of higher education uses an upward spiral because education is continuous, and every level increases understanding. Each level of the spiral represents a level of knowledge, building up to a minor or major in a certain area of specialization. The scope and sequence of the content are developed such that concepts and skills are revisited at each grade level with increasing depth. That therefore, is the basis for this project to argue that, the same should happen in the specific courses and not just in the sequencing of degrees: the majors and minors.

**Context Analysis of the Performance Setting**

The reason why minority learners continue to struggle to learn in higher education was a constant question and theme in the design process. The researchers could not lose focus of the fact that their struggles and those of diverse and minority learners was mainly due to the challenge of learning (and instructing) in an environment where the main model of instruction is based on a linear Eurocentric style. Our aim was to as much as we could, introduce within that environment, an integrated spiral or circular learning that would cater for the learners’ diverse backgrounds, languages and codes of communication.

The researchers had already found out from their classroom experience that the flexibility of online learning and its accompanying discussion boards provided an opportunity for sharing of experiences among learners and between learner and Instructor. Most minority learners felt comfortable sharing in that environment than in a face-to-face, where they are no longer conscious of their accents and lack of acceptance. They are in a private, brave and safe space.

According to Jerome Bruner (1960), selected curriculum should be delivered in such a way that it equips the learner with problem-solving skills and exposes them to the processes of inquiry and discovery, while the subject matter should be presented from the learner's way of viewing the world with grade levels embedded so that there is clear progression of mastery from one basic skill acquisition to becoming comfortable and eventually becoming expert.

**Learning Needs analysis**

Critical spiral pedagogical practices that were used for redesigning the sample course (Appendix 1) include listening to and including learners’ knowledge and perspectives in class, making connections between school and the broader community, and posing
problems to students that encourage them to question assumed knowledge and understandings. It also included an assessment of the gap between the knowledge, values, beliefs, skills and attitudes that the learners currently possess and the knowledge, values, beliefs, skills and attitudes that they require to meet the course objectives. Consideration was based on knowledge about learners with diverse backgrounds and how they use different models of knowledge acquisition and construction.

Choice of online learning environment was selected because it is supportive of a diverse, spiral and inclusive pedagogy. Learner-centered instructional strategies and assessment tools to address the diverse needs and interests of all learners is easily accessible for online instruction to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.

**Learner analysis**

Researchers’ involvement in this phase was minimal as they are not involved in the university selection for incoming students. After enrolling and joining the course, the researchers considered available data on learners’ demographics, prior knowledge, physiological, affective and social needs since most of these areas shape design decisions and influence the instructional methods and strategies that are chosen for implementation.

The needs analysis approach adapted from Bloom’s taxonomy of learning objectives and ADDIE Model of instruction design were used to diagnose and categorize and later evaluate learner needs and interests and to inform the design strategy. The course being redesigned is approved for a specific undergraduate level, and has met the requirements of the Essential Studies curriculum.

The ADDIE model of instruction design was originally developed by Florida State University to allow for analysis throughout the process, and represents the major phases of analysis, design, development, implementation and evaluation. Benjamin Bloom is famed for being in charge of the committee that structured learning objectives from low to high to allow for progress learning and evaluation. The famed objectives include remembering, understanding, applying, analyzing, and creating. For our design purposes we used levels of knowledge, comprehension, application, analysis, synthesis and evaluation (Bloom, 1956).

**Learning Context Analysis**

The University regulations and requirements for how an undergraduate course should look like and what requirements it should meet were used since it has to be in compliance with the Higher Education Commission guidelines. Since most Instructors design their courses in the absence of learners, their input, however indirect is crucial. Here presented are responses from some of the questions the learners were asked after the end of a course to solicit learner needs for the next course or to improve current one (University Course End Evaluations):
Ques. 1. What are the major strengths of the instructor/course?

Responses= 33.3%

- Discussions are very powerful.
- The major strengths of the course was the way we learned the global problems. This course has enables students to learn what caused the problem, who caused the problem and who can solve the problem.
- The course didn't focus on assignments and book, but more so of learning and understanding with good discussions about global concerns. I like there was no right or wrong answer and people were allowed to speak freely.
- It was very easy for students like me to get engaged and share what we knew with the class. I like how having everyone speak brought different perspectives to the topics we learned about. I also liked how this class made world issues very real to us so that we can make a change in the world, even if it's on a more personal level.
- The instructor has many amazing stories and experiences to share with the class.
- We learned a great deal of information and the questions always made you think.

Ques. 2. What do you suggest to improve the course?

Responses = 47.2%

- Discussions every other week. I think more people would post.
- Loved the teacher and she was my first ever Black Professor. This school lacks diversity in the variety of professors. Do better.

Other students commenting on some of the media tools said:

- “I think that the Ted Talks for this module really helped me understand the concepts better because there were real-life examples and they were very engaging”.

Figure 4: Ques. 3a.

Rate the course, instructional methods and instructor based on the following on a scale of 1-5. 5 being very satisfied and 1 being least satisfied:

Other students commenting on some of the media tools said:
I love this class simply because we can learn about the African American history which I wish we could have learned about throughout our elementary through high school years.

Some of the learners, on the section of “any other comments” made general observations about the university and diversity:

“I think WMU is passionate about showcasing diversity and inclusion within their learning environments, however in my experience it is just that showcasing...meaning that cultural diversity is not represented in the leadership on the faculty level therefore, different cultures are not prevalent.”

![Figure 5: Ques. 3b: Overall Rating](image)

![Figure 6: Ques. 3c](image)

**Other Qualitative Questions:**

1. What did this course teach you about yourself?

30% response rate

- Material taught resonated, was straightforward, and insightful.
- Black history is American history!
2. What did you find most valuable about this course?

• The Professor is willing to help us students and wants us to succeed. She has clear class structure and what she expects from students. The class discussions were great.
• The perspectives taught me to have more empathy.

3. Did this course teach you to interact with people who are different from you?

• Yes, I have learned to be more open-minded, work more on not generalizing or stereotyping people.
  Please, explain.
• I have leaned more about myself.
• I have learned how healthy relationships should work.

4. Did the course lead you to question some of your knowledge, deep-seated beliefs and values?

• Yes, and in the most best possible way.
  Please, explain
• This course has taught me to look outside of the box and truly be mindful of what I absorb.

Conclusion

In this project, the researchers endeavored to redesign an online college course in the African American and African Studies program. We have shared our experience and reflections of the spiral-reflective process that we used in redesigning as well as its outcome (appendix 1) and suggested a spiral pedagogy and inclusive instructional approach.

We made the argument that the Eurocentric linear pedagogy is inadequate and in some cases detrimental to learners who are from backgrounds that are often viewed as different. Indeed, as educators, we ought to take into account the concepts of intersectionality and positionality to ensure that we do not only reach, but most importantly, that we do include all of our learners, in the instruction design and learning process.

The spiral pedagogy and the spiral-reflective process that we are recommending, seem to lend themselves to a more inclusive classroom where other ways of knowing are explored in the spirit of making the learning process more inclusive and accessible to all learners, notwithstanding their race, ethnicity, gender, sexuality, country of origin, and other diverse aspects. Designing courses that primarily center around learners’ lived experiences and cater to their learning skills tend to engage learners more in the learning process, as they find those courses more relatable. Moreover, designing courses that make the concepts of learning outcomes and assessment of those learning outcomes as a core component of the design process are more likely to place learners at the center of not only knowledge acquisition, but also of its production.
Our goal as researchers of non-linear approaches and pedagogy that is active, integrated, spiral and yet critical, is to make recommendations that will benefit other Instructors, Instructional Designers in higher education at a global level, academic administrators and managers. It is our hope that the adoption of pedagogy and instruction methods that are inclusive will not only benefit our learners but will also benefit all parties involved in the learning process. Although action research was used to some extent, the main method was spiral-reflection aimed at improving instruction design and the learning process as a whole.
References


Appendices

Appendix 1: Redesigned Course sample

Redesigned Course Using Module One As Sample

Module 1 title: Dimensions of Black Consciousness and Identity

Main themes: Defining terms; Identity Politics; science and technology's impact on shaping race and racism.

Course goal: To think critically, read, understand and analyze content, class text and videos based on themes about African Americans and Africans in the USA and their experiences.

Objectives

• Exploring factors and dimensions of identity and how that affects one’s level of consciousness.
• Analyze how intersecting identities and previous experiences have shaped not only the US experiences, but also the everyday strategies of how Blacks resist in America and throughout the world.
• Create a learning community.

Learning Outcomes

The learner will:

• Define terms and concepts associated with African Americans and Africans.
• Define terms and concepts associated with Black identity and consciousness.
• Explore theories and other ideas about the study of Africans in America.
• Demonstrate a basic understanding and start to express their opinion about their level of consciousness and thoughts on their identity.
• Post a personal reflection on the main theme of Module 1 and respond to classmates on assigned topic.

Activities, Instruction and Media strategy

Guiding questions

One classical goal of studying African American and African studies is that it is an Agent of Empowerment for Student Development- How true is this for you? How has this module helped you understand/get insights about your identity? Should such a curriculum be integrated into the American education system (K-12 to higher education)?

1. Read and Research: Class text; quote from Page 186 – “It is a peculiar sensation, this double consciousness, this sense of always looking at one's self through the eyes of others, of measuring one's soul by the tape of a world that looks on in amused contempt and pity. One ever feels his twoness, - an American, a Negro; two
souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder.”

2. Watch/Listen: Select one or two talks:
   • https://www.ted.com/playlists/230/10_great_talks_to_celebrate_bl
   • US economy: Why black Americans still find it harder to get jobs
   • Can we overcome the economic legacy of racism?


4. Wrapping it all up: Watch/Listen:
   “The limits of tyrants are prescribed by the endurance of those whom they oppress”. What does this mean to you and your generation?
   • Black Politics in Trump's America
   • https://www.youtube.com/watch?v=WDIyhv-d4-c

5. Discussion post 1: Using the guiding questions for this module, and those in the “Wrapping it All Up” section (5) post a reflection (2-3 paragraphs/250-300 words) and respond to two classmates.