Flipping the Classroom

WORKSHOP GUIDEBOOK

Natasha Barreto M.Ed

Mary Clare DiGiacomo Ph.d

May 2014

TABLE OF CONTENTS

1

FLIPPING FLAVORS

Today's higher education institutions need to meet the needs of the 21st century learner. Much like aiming at a moving target, educational institutions are looking for ways to prepare students to thrive in a context where digital technologies are constantly morphing. Today's learners need more than explicit knowledge. They need new ways to learn and to be prepared to build knowledge, communicate and collaborate with others, think critically and creatively, problem-solve, make decisions and have the tools to keep researching and learning. This is where the flipped classroom comes in. Whether you prefer to refer to it as flipped, shifted, or inverted learning or as the flipped classroom, the key principle is the same. It puts students in focus and allows them to take ownership of their learning. At their own pace, they can learn content and prepare to demonstrate comprehension to instructors and peers.

> *"Sophisticated ICTs (information and communication technologies) are changing the nature of "perennial" skills valuable throughout history, as well as creating novel "contextual" skills unique to new millennium work and citizenship."*

The flipped classroom provides an instructional model for active and collaborative learning in a learner-centered classroom. Instructors free-up class time be offloading lecture/lesson time to *out-of-class time*. This usually means that lectures are moved to computer-based multimedia instruction students access at their own pace outside of formal class time. *In-class time* is transformed into a vibrant, interactive environment where students transfer knowledge and skills to applied situations.

The next pages in this section will provide you with resources about flipped learning.

The Many Faces of the Flipped Classroom | https://www.youtube.com/watch?v=DexW2QfCSKU&feature=youtu.be
Listen as this panel of classroom teachers engage in a discussion of the various permutations of the flipped classroom.

Demystifying Flipped Learning | https://www.youtube.com/watch?v=DexW2QfCSKU&feature=youtu.be
Learn about the the four myths of flipping.

How to Flip a Classroom Inside and Out | http://www.flippingphysics.com/how-to-flip.html
Jonathon Thomas-Palmer talks about basic steps to flipping a class, where to start looking online for resources and examples of different ways to flip.

21st Century Classroom | https://www.youtube.com/watch?v=brUZTton67s
In an Youtube video, Dan Spencer shows examples of how he condenses his lectures into 15-20 minute screencasts for students to watch at home on his classroom.

Flipped Classroom Explained in 22 Minutes | https://www.youtube.com/watch?v=HLLciZdUpDc&list=FLr4hI_COBiunN0y0MBcjHYA&index=2
Aaron Sams presents the Flipped Classroom concept to educators at the American Chemical Society meeting in Denver.

Flip Your Students' Learning | http://www.ascd.org/publications/educational-leadership/mar13/vol70/num06/Flip-Your-Students'-Learning.aspx
Aaron Sams discusses how flipped learning helps teachers move away from direct instruction as a teaching tool toward a student-centered approach.

Maybe we Should Call it The Shifted Classroom | http://audrey-mcsquared.blogspot.com/2012/11/maybe-we-should-call-it-shifted.html?spref=tw
Audrey McLaren discusses the differences between lesson time and comprehension time.

Base Group Weekly Check

1. Each person records their self-rating.
2. Total the columns and rows; compute group average.

Week ____

Name					Total
Attended Class					
Reflected & reviewed notes					
Attempted all homework					
Got help when needed					
Did something for myself					
Totals					

Group Average Score: _____
Group Strengths: _____
Group Goals: _____

Week ____

Name					Total
Attended Class					
Reflected & reviewed notes					
Attempted all homework					
Got help when needed					
Did something for myself					
Totals					

Group Average Score: _____
Group Strengths: _____
Group Goals: _____

Week ____

Name					Total
Attended Class					
Reflected & reviewed notes					
Attempted all homework					
Got help when needed					
Did something for myself					
Totals					

Group Average Score: _____
Group Strengths: _____
Group Goals: _____

Week ____

Name					Total
Attended Class					
Reflected & reviewed notes					
Attempted all homework					
Got help when needed					
Did something for myself					
Totals					

Group Average Score: _____
Group Strengths: _____
Group Goals: _____

Blooms and Mastery Learning:

Figure 1

> *"Rather than starting with knowledge, we start with creating, and eventually discern the knowledge that we need from it."*
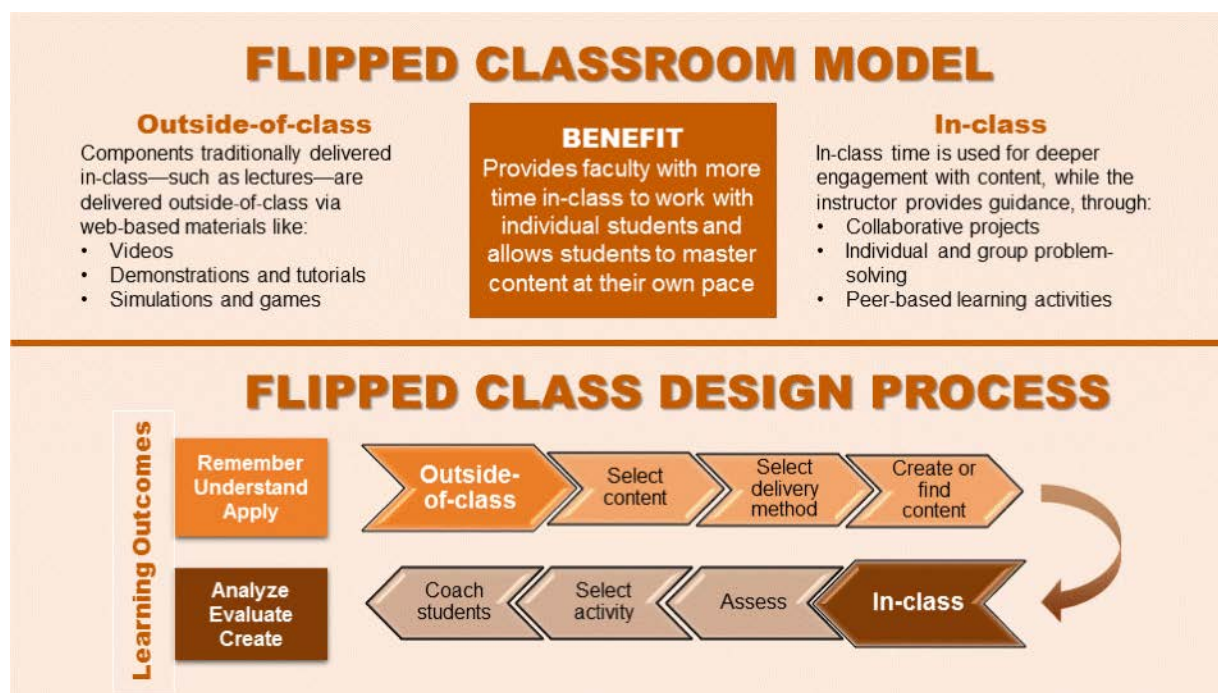

Figure 2

Quote source: "Flip This: Bloom's Taxonomy Should Start with Creating." MindShift. N.p., n.d. Web. 29 Apr. 2014. http://blogs.kqed.org/mindshift/2012/05/flip-this-blooms-taxonomy-should-start-with-creating/

Figure 1 Source: Schultz, Lynn 2005. http://www.odu.edu/educ/roverbau/Bloom/blooms_taxonomy.htm

Figure 2 Source: "Teaching & Learning Services." Flipped Classroom Resources. N.p., n.d. Web. 29 Apr. 2014. http://wallacecenter.rit.edu/tls/flipped-classroom-resources

Granola Bar Group

Meet your granola bar group partners and work on your flipped learning definition.

Tasks:

1. Individually, write your definition of flipped learning.
2. Find your group members by matching your granola bars.
3. Share, summarize, synthesize.
4. Write your group's definition on post-it and place on wall.
5. Report out.

Personal Definition of The Flipped Classroom:

Group Definition of the Flipped Classroom:

EFFECTIVE FLIP

The flipped classroom is an amalgam of online lectures, mini in-class lectures and active learning strategies. By observing students and communicating with them, instructors are able to identify and meet students' needs while suggesting areas for improvement. And by collecting feedback from students, instructors are able to adjust content and activities, when necessary, to review concepts students struggle with.

Instructors should focus on giving students choices in their learning and layering the curriculum. The idea is that students take ownership of their learning when they have choice in how they do it. The next pages in this section will provide you with resources to help you flip effectively.

Dare to Differentiate Wiki | http://daretodifferentiate.wikispaces.com/Choice+Boards
Offers explanations and ideas on how to create a flexible learning environments and address students' needs.

Help4Teachers.com | http://help4teachers.com
Explains how to create a Layered Curriculum classroom. This methods focuses on 3 components: choice, accountability, and promoting higher and more complex thinking.

Classroom Seating Arrangements and Learning Spaces | http://www.pinterest.com/runfardvs/classroom-seating-arrangements-and-learning-spaces/
Active learning does not necessarily happen in rows. This offers some examples of how you can organize your classroom to foster collaboration.

Flipped-Mastery Series | http://www.flipped-history.com/2014/01/flipped-mastery-article-series.html?spref=tw
Tom Driscoll compiled his Flipped-Mastery units as well as techniques for managing mastery learning in a "traditional" school setting.

Flipped Classroom and Video as Homework | https://www.youtube.com/watch?v=7_ejZ5OMIDE&feature=relmfu
Aaron Sams and Jon Bergman from Woodland Park, CO show how they have flipped learning on its head.

Giving the Classroom Back to Kids: Supporting Independent Learning through the Flipped Model | https://www.youtube.com/watch?v=E61YKwA6B28&list=PLC590EAE5B5F36380&index=15&feature=plpp_video&safe=active
Brian Bennettflipped his teaching and gave students the choice on what to learn, how to learn, where to learn & when to learn.

Connecting Tradition and Inspiration | https://twitter.com/kleinerin
Erin Klein offers many examples and tools to engage students in Hands-on Learning.

Differentiation Through Flipped Out Collaboration | http://blogs.techsmith.com/for-educators/differentiation-with-flipped/?utm_source=bit.ly&utm_medium=social&utm_campaign=tsce#.U1-1LK1dUSt
Zach Cresswell shows an example of how to collaborate and work outside your bubble.

Kids Teching Kids | https://www.youtube.com/watch?v=_8OAfHg0CP4
What if students could teach other students? Or even better, what if the students could learn in the process of teaching? Eric Marcos has students show up every day after class to make math videos for their fellow students and the rest of the world.

Flipped Professional Development | http://www.flippedpd.org/
FlippedPD offers a modern apporach to professional development by maximizing teachers' time for professional learning.

Flipped Professional Development | http://www.flippedpd.org/
FlippedPD offers a modern apporach to professional development by maximizing teachers' time for professional learning.
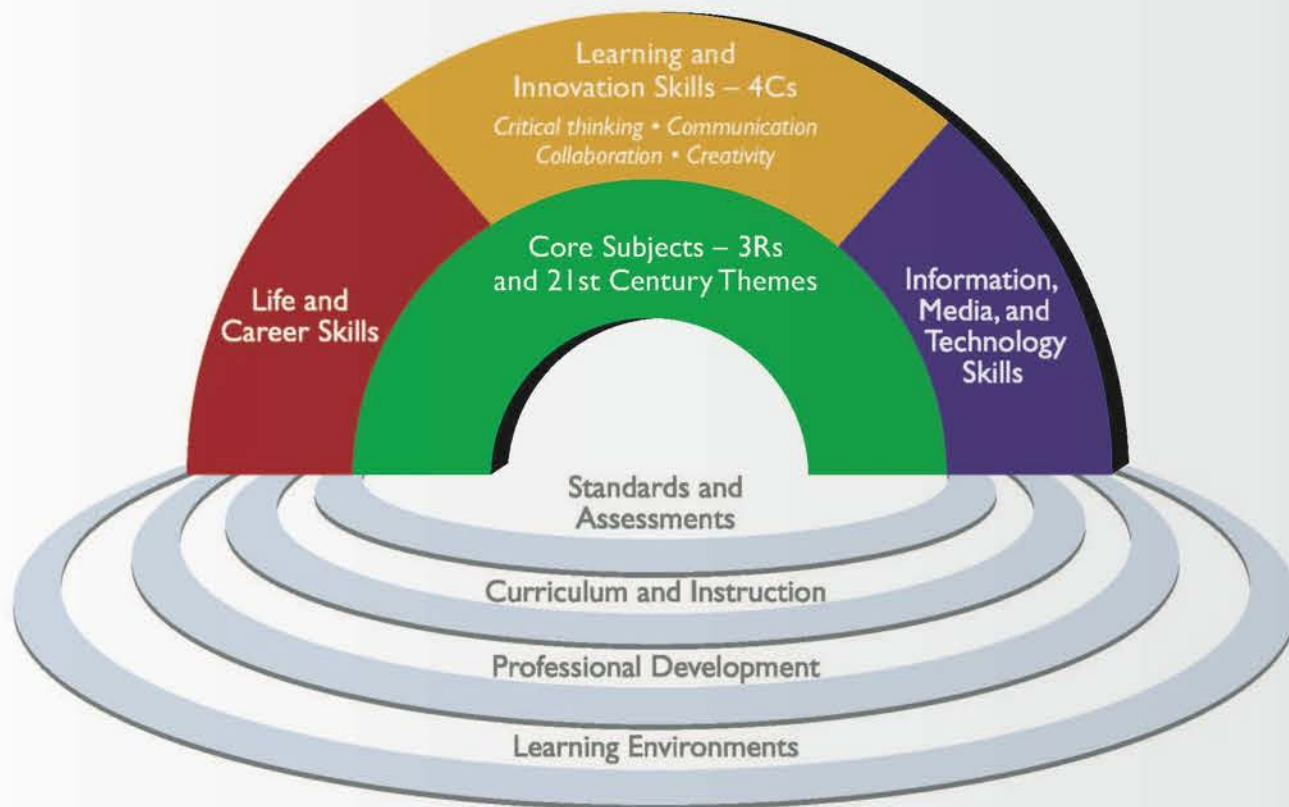
Pairs Appointment Clock

Framework for 21st Century Learning

The Partnership for 21st Century Skills has developed a vision for student success in the new global economy.

21st Century Student Outcomes and Support Systems

21ST CENTURY STUDENT OUTCOMES

To help practitioners integrate skills into the teaching of core academic subjects, the Partnership has developed a unified, collective vision for learning known as the Framework for 21st Century Learning. This Framework describes the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies.

Every 21st century skills implementation requires the development of core academic subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of core academic subject knowledge.

Within the context of core knowledge instruction, **students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication and collaboration.**

When a school or district builds on this foundation, combining the entire Framework with the necessary support systems—standards, assessments, curriculum and instruction, professional development and learning environments—students are more engaged in the learning process and graduate better prepared to thrive in today's global economy.

Core Subjects and 21st Century Themes

Mastery of **core subjects and 21st century themes** is essential to student success. Core subjects include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics.

In addition, schools must promote an understanding of academic content at much higher levels by weaving **21st century interdisciplinary themes** into core subjects:

- **Global Awareness**
- **Financial, Economic, Business and Entrepreneurial Literacy**
- **Civic Literacy**
- **Health Literacy**
- **Environmental Literacy**

Learning and Innovation Skills

Learning and innovation skills are what separate students who are prepared for increasingly complex life and work environments in today's world and those who are not. They include:

- **Creativity and Innovation**
- **Critical Thinking and Problem Solving**
- **Communication and Collaboration**

Information, Media and Technology Skills

Today, we live in a technology and media-driven environment, marked by access to an abundance of information, rapid changes in technology tools and the ability to collaborate and make individual contributions on an unprecedented scale. Effective citizens and workers must be able to exhibit a range of functional and critical thinking skills, such as:

- **Information Literacy**
- **Media Literacy**
- **ICT (Information, Communications and Technology) Literacy**

Life and Career Skills

Today's life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills, such as:

- **Flexibility and Adaptability**
- **Initiative and Self-Direction**
- **Social and Cross-Cultural Skills**
- **Productivity and Accountability**
- **Leadership and Responsibility**

21ST CENTURY SUPPORT SYSTEMS

Developing a comprehensive framework for 21st century learning requires more than identifying specific skills, content knowledge, expertise and literacies. An innovative support system must be created to help students master the multi-dimensional abilities that will be required of them. The Partnership has identified five critical support systems to ensure student mastery of 21st century skills:

- **21st Century Standards**
- **Assessments of 21st Century Skills**
- **21st Century Curriculum and Instruction**
- **21st Century Professional Development**
- **21st Century Learning Environments**

For more information, visit the Partnership's website at www.P21.org.

PARTNERSHIP FOR 21st CENTURY SKILLS

Reader-Eagle-Hawk Group Activity

Reader-Eagle-Hawk is a group activity where positive interdependence and individual accountability are emphasized. Each member of the group has a role. Critical thinking, listening, collaboration, and communication skills are needed to effectively complete this activity.

One member reads or presents an idea to the group. The group identifies the three most important words and why they chose those three words. Hawks fly to another group, share, and then return to the nest. Eagles fly to a different group, share, and then return to the nest. The group works together to refine their choice of three words.

Group processing considerations

1.   Name two things your group did well in working together.
2. Name one thing your group could do even better the next time.

Appointment Clock

Appointment clock is used to randomly pair students quickly each day.

Tasks:
1. Using your appointment sheet, go around the room and make appointments with four different people.
2. Appointments must be for the following times: 11:30, 1:00, 2:00, 3:00.
3.   In the factoid spot, write something significant about the person.

Appointment Clock Activity Template
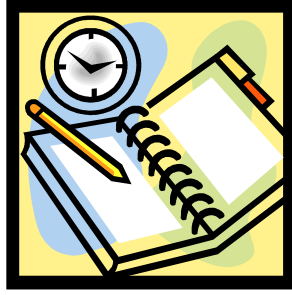
TIME	FACTOID
9:00	
10:00	
11:30	
12:00	
1:00	
2:00	
3:00	
4:00	
5:00	
6:00	
7:00	
8:00	

Flipped Lesson Plan

Name: _____

Date: _____

Topic
- Choose a topic where you would spend most of your classroom time lecturing
- Choose a topic that you want more discussion or interaction with the content in class.

Learning Outcomes

List two to three student learning outcomes mapped to this lesson. At the end of this lesson, students will be able to:

1.

2.

3.

PART 2

Summary of Tasks/Actions

Describe strategies, tasks, and activities for each learning mode.

In-Class (Synchronous)

Out-of-Class (Asynchronous)

Assessment
Describe the tasks that indicate whether students have achieved the learning outcomes.

Evaluation
Describe how you will collect and analyze information about your flipped lesson to make judgments and improve its effectiveness. How will you know if you were successful or not?

Resources
List websites, articles, books, and tools you will be using to implement your plan.

Learning Outcomes Template

Flipped Lesson	Learning Outcomes					
Task: Map each content/task/activity with appropriate learning outcome(s) (LO). Select all LOs that apply.	**Learning Outcome**	**Learning Outcome**	**Learning Outcome**	**Learning Outcome**	**Learning Outcome**	**Learning Outcome**
In Class						
In Class						
In Class						
Out of Class						
Out of Class						
Out of Class						

<div align="center">

3

TECHNOLOGY

</div>

According to a report, Grade Change – Tracking Online Education in the United States (2014), the number of students taking at least one online course grew to a new total of 7.1 million, with the proportion of students taking at least one online course at an all-time high of 33.5% This growth shows that learners are increasingly shifting to online learning experiences. One of the reasons learners are migrating to online learning might be directly related to the affordances of digital technology. These affordances allow learners to have more control over their learning. Instead of waiting for the instructor to "transfer" knowledge to them, they take on an active role in their learning process by reviewing lecture materials and readings at their own pace and as often as they choose to. In the same way, the flipped classroom paradigm uses technology to empower students. Its underlying principle is the inversion of traditional teaching techniques. In this model, lectures are delivered online as

homework and learner-centered activities take the stage in the classroom. The flipped classroom paradigm moves away from the uni-directional communication model to a more democratic classroom environment, where students contribute to the class and construct meaningful learning experiences. The next pages in this section will provide you with technology resources to help you flip effectively.

Open Educational Resources:
This is a partial listing of OER sources which we hope you find useful.

Khan Academy | http://www.khanacademy.org/
Good resource for pre-created content. Watch the videos available to make sure they align with your learning outcomes.

OER Commons | http://www.oercommons.org/
Open standards-aligned digital educational content hub. This site offers curated class learning materials from around the world.

"The focus of flipped teaching is different from other examples in that the technology itself is simply a tool for flexible communication that allows educators to differentiate instruction to meet individual student needs and spend more time in the classroom focused on collaboration and higher-order thinking."

Brightsorm | http://www.brightstorm.com/
Short videos (2-5 minutes) for all major subjects. It seems to be aimed at high school subject areas. Some videos are free but you will have to pay for full access.

Mathispower4u | http://mathispower4u.yolasite.com/
Thousands of math videos that are free to use (noncommercial purposes) as long as you attribute the work to the author.

TED-Ed | http://ed.ted.com/
5-17 minute talks by experts in a wide variety of fields. Teachers can customize flipped lessons.

YouTube and YouTube EDU | https://www.youtube.com/education
Great variety of content. Watch the videos available to make sure they align with your learning outcomes.

Merlot | http://www.merlot.org/
Free and open peer reviewed collection of teaching and learning materials and faculty-developed services contributed and used by an international education community.

Saylor.org Academy | http://www.saylor.org/
Free and open collection of college level courses developed by a team of experienced college professors to fulfill the same learning objectives as traditional college courses. Courses are licensed using Creative Commons.

MentorMob | http://www.mentormob.com/
Allows the creation of "Playlists" of links, files, and/or text from your content.

Pinterest | http://www.pinterest.com/
Use it to collect ideas ranging from pedagogy, to classroom management, to content.

Learnist | http://learni.st/
Designed to help you create collections for learning.

Educlipper | http://educlipper.net/
Create educational digital clipboard.

Blendspace | http://www.blendspace.com
Blendspace allows educators to blend their classroom with digital content.

Symbaloo | http://www.symbaloo.com/
Access your bookmarks anywhere with Symbaloo, a free social service now available in the US.

EDPuzzle | http://www.edpuzzle.com/
Create video lessons.

Free tools for creating digital content for your flipped classroom:
This is a partial listing of tools which we hope you find useful.

Prezi | http://prezi.com/
Non-linear presentation tool that offers more creative features than PowerPoint. You will need an account to create and save presentations.

Jing | http://www.techsmith.com/jing.htm
Free web-based screencasting tool. You will need an account to create and save presentations.

Screencast-o-matic | http://www.screencast-o-matic.com/
Allows you to create screencasts. See a walkthrough here: http://www.flipped-history.com/2014/04/screencast-o-matic-walk-through.html

Screenr | http://www.screenr.com/
Free web-based screencasting tool.

Screencast.com | https://www.screencast.com/
2GB of free storage, more available for paid version. You will need an account to create and save presentations.

Movenote | http://www.movenote.com/
Lets you upload slides (as long as they are in PDF, JPG, or PNG format) and use your webcam to create a picture-in-picture effect.

A Web Whiteboard | http://awwapp.com/
A Web Whiteboard is touch-friendly online whiteboard app that lets you use your computer, tablet or smartphone to easily draw sketches, collaborate with others and share them with the world.

Scriblink | http://www.scriblink.com/
Free online whiteboard that allows users to collaborate in real-time. No registration required. Built-in chat, image uploading, file sharing and more.

Educreations | http://www.educreations.com/
Allows teachers to make screencasts that are only available only to registered students in your class.

Pen.io | http://pen.io/
Publish a Beautiful Blog Post Online in Seconds.

VideoNotes | http://www.videonot.es/
Take notes on YouTube videos and sync with your Google Drive account.

Content Creation on iPads:

Screenchomp | http://www.techsmith.com/screenchomp.html
Doceri | http://doceri.com/
Knowmia Teach | http://www.knowmia.com
Showme | www.showme.com/
Explain Everything | http://www.morriscooke.com
Ask3 | http://ask3.me/

Commercial Online Content Creation Tools:

Deskscribble - http://www.deskscribbleapp.com/
Snagit - http://www.techsmith.com/snagit.html
Camtasia Studio - http://www.techsmith.com/camtasia.html
Collaborate - https://www.blackboard.com/Platforms/Collaborate/Products/Blackboard-Collaborate.aspx
Softchalk - http://softchalk.com/
Captivate - http://www.adobe.com/products/captivate.html
Articulate - http://www.articulate.com/
ScreenFlow - http://www.telestream.net/screenflow/overview.htm

Equipment for Video Creation
1-Take Video Resources | http://fizz.fi.ncsu.edu/1-take-video-resources/

4

RISKS AND LIMITATIONS

Extracted from Aaron and Brian's article "The Truth About Flipped Learning: http://www.eschoolnews.com/2012/05/31/the-truth-about-flipped-learning/

Assumption: Videos have to be assigned as homework.
Although video is often used by teachers who flip their class, it is not a prerequisite, and by no means must a video be assigned as homework each night. As with everything else, the use of a particular learning tool (teacher-made videos, hands-on experiments, online simulations, supplementary text, or current news articles) needs to be carefully evaluated and implemented by the teacher to accomplish the learning objective.

Resulting misconception: Videos are just recorded lectures.

Yes, in a flipped class a short video (usually 8 to 12 minutes in length) may be a recorded lecture, but educators are using video as a medium to pose questions, generate conversations, provide instructions for projects or experiments, assist with remediation, create lessons that can be used during a student's absence, give example problems and solutions, and clarify misconceptions. Teachers are also encouraging students to create videos to foster greater peer-to-peer learning practices.

Resulting misconception: Homework is bad; therefore a flipped class is bad.

Flipped class practitioners create a learning environment in which student work can be completed in class. This requires a change in the way a class (or school) is structured. Flipped classrooms may look more like "learning centers" where students are working on different tasks at the same time. Our classrooms are quite chaotic: small groups gather at the corner tables, a one-on-one conversation up front, experiments at the stations, and yet others writing in their research journals. On a larger scale, an entire school could be restructured to reflect the value that unstructured and "unprogrammed" time has on student learning and well being. Providing students with time during class to complete their school work also reflects a respect for students' time and life outside of school. Because the class time is no longer the teacher's to control, time in school is now focused on student progress rather than teacher-determined timelines.

Resulting misconception: Students must have internet access at home.

If a teacher chooses to assign a short video as homework, equitable access to the video must be ensured. For those students who do not have access at home, teachers are giving flash drives to students who have computers at home, but no internet access; burning DVDs for students with no computers, but DVD players; and providing additional access to computers either in class or before, during, or after the school day. Equity is a very important (and a legal) consideration, but creating equitable access to instructional tools is not an insurmountable hurdle. The issue surround equity can be solved with a little creativity and pooling of resources.

Assumption: The Khan Academy is the flagship model of a flipped classroom.

The popularity of the Khan Academy might have come about because of Sal Khan's TED talk, resulting in significant press coverage, or when it received funding from the Gates Foundation, but whatever the reason, the Khan Academy did vault the idea of the flipped classroom into the media spotlight starting in 2011. The media often grab on to new, flashy ideas, and as a result, video use in schools has been given quite a bit of attention. The Khan Academy is one of many powerful supplemental sites for video content resources. But a true flipped classroom is created by classroom teachers working within their school community to give the learning back to their students.

Resulting misconception: Students spend class time working through online modules.

While computer-based modules can help facilitate learning, a flipped classroom does not rely exclusively on any one single tool. Even though the national media, such as 60 Minutes, and schools themselves such as charter or blended schools like Carpe Diem show clips of students glued to computers in rows of cubicles completing learning modules, not every teacher using the flipped techniques does so. In fact, mechanized online modules are the exception rather than the rule in a flipped classroom. Rows of desks and chairs play no role in our classrooms, just as drill-and-kill modules do not.

Resulting misconception: A flipped class results in a one-size-fits-all education.

On the contrary, a well-run flipped classroom can help a teacher individually address the needs of each student. Differentiation is key, because each student has an opportunity for one-on-one attention nearly every day from his or her classroom teacher. We meet face to face with our students and converse about the lesson, as well as life. We guide students to the counselor if needed, but we listen, don't judge, and expect our students to master the subject. The proof is in increased formative and summative assessment scores, but more importantly with our students telling us they "get it!"

Resulting misconception: The role of the teacher becomes diminished.

Actually, the teacher's role is amplified as the responsibility of the teacher and the learner is reversed. Educators now have a different relationship with each student that will in turn meet their needs more completely. If a teacher is only supervising students who are using computerized learning modules, then yes, theoretically, one teacher could probably supervise dozens, if not hundreds, of students at a time. But if the role of the flipped classroom teacher is to interact and meet the unique learning needs of each and every student in every class every day, then the need for qualified, caring, professional educators increases. Although video can be leveraged to deliver direct instruction, it does not, and cannot, replace the teacher as the facilitator of learning.

Assumption: A flipped classroom centers around the videos.

Teachers are still responsible for making decisions about which tools will best meet the needs of their students. For some teachers utilizing the flipped class technique, a video meets that need. For others, video is not a part of that overall strategy. Neither approach is superior to the other, and the decision must be made with the overall learning climate and learning objectives in mind.

Resulting misconception: All flipped classrooms use video as a "front-loading" instructional tool.

Looking at instruction through Bloom's Taxonomy, an educator can take one of two approaches to teaching: start with either Lower Order thinking (and work up the pyramid) or Higher Order thinking (and then work down), often referred to as bottom-up (front-loading) or top-down teaching. If teachers use instructional video in a bottom-up (or front-loading) approach, then the teacher will lead the instructional cycle with a video and build the remaining learning activities off of the video lesson. Meanwhile, many teachers use video for extension, application, or even skill assessment (also known as higher-order thinking skills). A top-down approach places an instructional video (or any other resource) in the middle of the learning cycle as found in an inquiry-based classroom or a problem based learning (PBL) class. There is no right or wrong answer on how or when a flipped educator incorporates video, as long as it's the right tool.

Resulting misconception: Flipped learning is a distinct pedagogy or methodology.

The flipped classroom is an ideology, not a methodology. We do not think of it as a "method" (a step-by-step prescribed process), but one of many techniques in the arsenal. Flipped classroom teachers vary in grade levels and subject matter. So, a chemistry teacher in a suburban city in Indiana and a chemistry teacher in a small rural town in Colorado might both be flipped teachers, but their techniques could be on opposite ends of a teaching spectrum because their students' needs are different. A student who excels in a flipped class might have a self-directed schedule with little intervention or direction from the teacher, while a student who struggles will get more direction and one-on-one instruction. We have seen both types of students succeed in the same class with a different approach that meets their personal learning styles.

Conclusion: Don't be fooled by oversimplifications

The generic term "flipped classroom" might be a bit misleading, and there could be some baggage associated with it, but that is no reason to write it off as a useless educational model. It is being utilized to help meet the individual learning needs of students. Before embracing or rejecting this technique, or any other educational tool, consider carefully how practitioners are actually using it. Do not be fooled or confused by the media hype, oversimplifications, or misinformation.

Ultimately, flipped learning is not about flipping the "when and where" instruction is delivered, although that is part of it. It's about flipping the attention away from the teacher and toward the learner; it is about eliminating large-group direct instruction and meeting the individual learning needs of each student. Flipping a class is about reevaluating what is done in class and leveraging educational tools to enhance the learning experience.

Issues to Consider

- Computer/internet access: give students options and expectations then let them decide.
- Time required: Same amount of time required, it's just shifted. Most of the work is now front-loaded. Frees up time for teacher to be with students one-on-one, but it requires planning and working ahead. It usually takes several semesters to master. The payoff comes slowly when you are able to establish a system for your class.
- Accessibility takes time and you will need to make sure your videos are ADA compliant.
- Students will not be used to this format. Be prepared to familiarize your students with what is required of them in a Flipped Classroom format.

Assessment

What if students don't watch the videos? - https://www.youtube.com/watch?v=g1MKpyVPilI

What do you do when students don't do their homework? Treat notes the same way. It helps when notes are built into grading systems. Very "carrot and stick" but it makes students accountable.

Have more questions or concerns? Watch Katie Gimbar's FAQ Channel - https://www.youtube.com/playlist?list=PLB632EC24182B4D40

ASSESSMENT & EVALUATION

"Assessment is a systematic approach to collecting, analyzing, and reviewing data to improve learning. It is important because it tells us what and how much students are learning and where they're learning it, and it gives us insight into how we might refine our programs to help them learn more. The best assessment activities supply us with meaningful information that can be used as the basis for improving educational programs."

Quote Source: Assessment for Excellence: The Philosophy and Practice of Assessment and Evaluation in Higher Education (2nd ed.). Alexander W. Astin and anthony lising antonio. Lanham, MD: Rowman & Littlefield and the American Council on Education, 2012. 3

Assessment Instruments

Creating (Does) → Portfolio, Workplace Based Assessments

Evaluating (Shows How)
Analyzing (Knows How)
Applying (Knows How) → Structured Examinations, Case Based Exams Short/Long

Understanding (Knows)
Remembering (Knows) → Multiple Choice Questions, Short Answer Questions, Essay
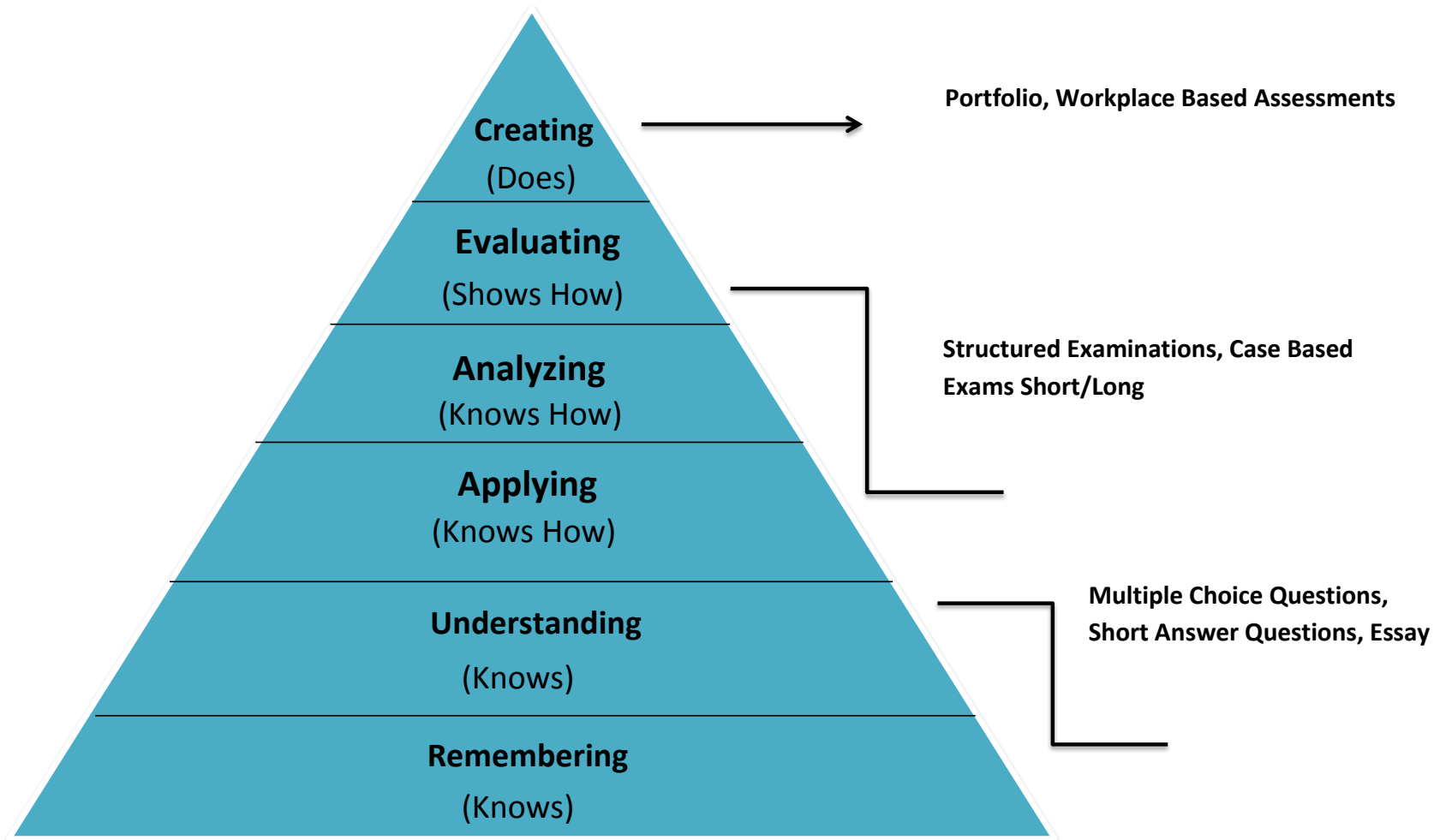
Choosing the Right Assessment Tools

(Based on Fulks, Janet, "Assessing Student Learning in Community Colleges", Bakersfield College, 2004 obtained at http://online.bakersfieldcollege.edu/courseassessment/Default.htm)

Examples of various assessment tools are included in the table below. It should be noted that the categorizations may vary depending upon your perspective and the way in which you construct the assessment.

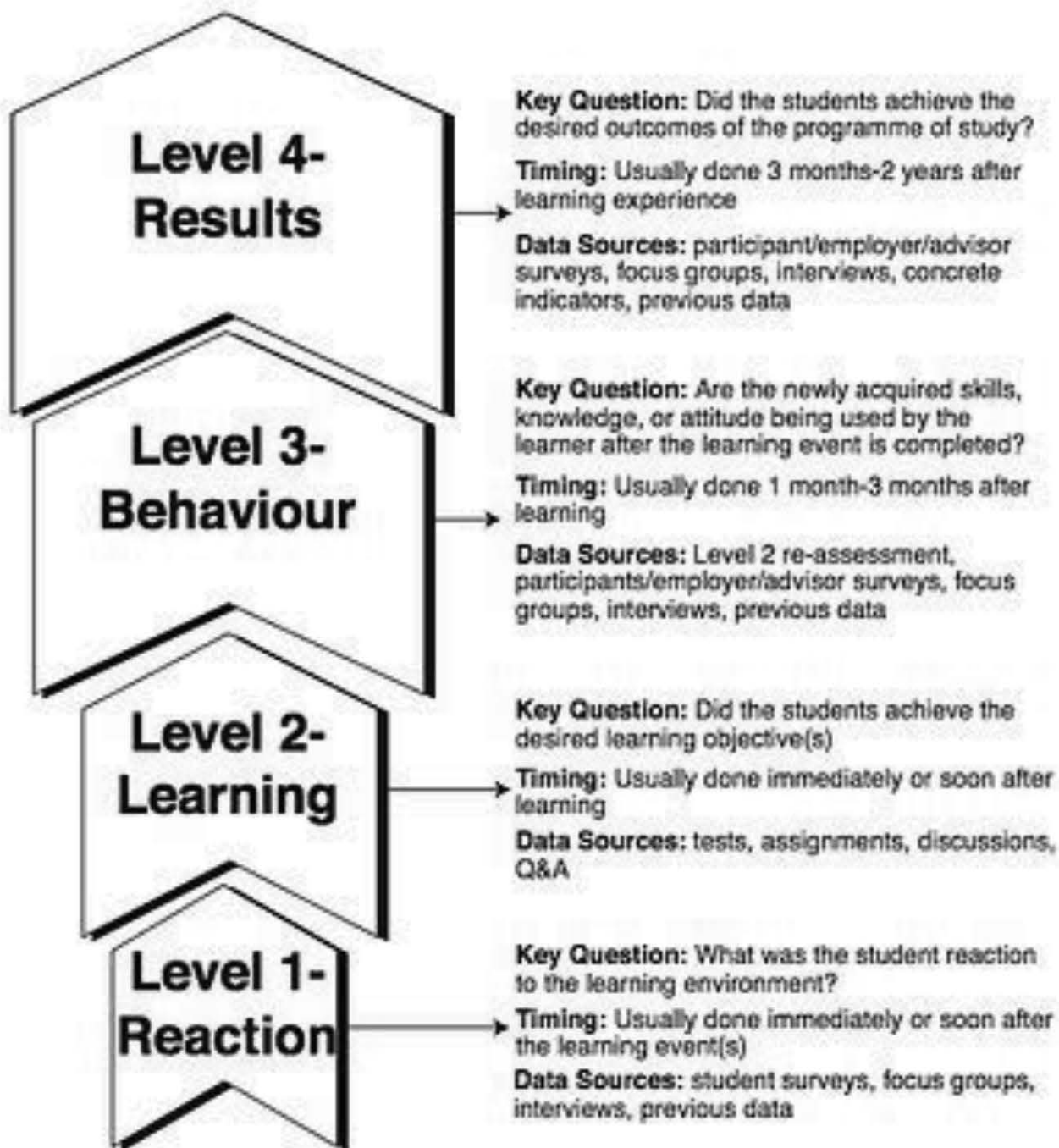| Tool	Method D= Direct I= Indirect	Domain C= Cognitive P= Psychomotor A= Affective	Usage Type F= Formative S= Summative	Bloom's level K= Knowledge C= Comprehension A= Application ASE= Analysis or Synthesis or Evaluation	Pros	Cons
Multiple Choice Exam	D	C	F or S	K, C If carefully constructed ASE	easy to grade; objective	reduces assessment to multiple choice answers
Licensing Exams	D	C	S	K, C, A	easy to score and compare	no authentic testing, may outdate
Standardized Cognitive Tests	D	C	S	K, C, A?	comparable between students	heavily dependent on exposure to topics on test
Checklists	D	C, A, P	F or S	Variable	very useful for skills or performances; students know exactly what is missing	can minimize large picture and interrelatedness; evaluation feedback is basically a yes/no - present/absent - without detail
Essay	D	C, A	F or S	K, C, A, ASE	displays analytical and synthetic thinking well	time consuming to grade, can be subjective
Case Study	D	C, A	F or S	K, C, A, ASE	displays analytical and synthetic thinking well; connects other knowledge to topic	creating the case is time consuming, dependent on student knowledge form multiple areas
Problem Solving	D	C	F or S	K, C, A, ASE	displays analytical and synthetic thinking well; authentic if real world situations are used	difficult to grade due to multiple methods and potential multiple solutions
Oral Speech	D	C	F or S	Variable K, C, A, ASE	easily graded with rubric; allows other students to see and learn what each student learned; connects general education goals with discipline- specific courses	difficult for ESL students; stressful for students; takes course time; must fairly grade course content beyond delivery
Debate	D	C, A	F or S	K, C, A, ASE	provides immediate feedback to the student; reveals thinking and ability to respond based on background knowledge and critical thinking ability	requires good rubric; more than one evaluator is helpful; difficult for ESL students; stressful for students; takes course time

Tool	Method D= Direct I= Indirect	Domain C= Cognitive P= Psychomotor A= Affective	Usage Type F= Formative S= Summative	Bloom's level K= Knowledge C= Comprehension A= Application ASE= Analysis or Synthesis or Evaluation	Pros	Cons
Product Creation & Special Reports	D	C, P, A	F or S	Variable K, C, A, ASE	students can display skills, knowledge, and abilities in a way that is suited to them	must have clearly defined criteria and evaluative measures; "the look" can not over- ride the content
Flowchart or Diagram	D	C	F or S	C, A, ASE	displays original synthetic thinking on the part of the student; perhaps the best way to display overall high level thinking and articulation abilities	more difficult to grade, requiring a checklist or rubric for a variety of different answers; difficult for some students to do on the spot
Portfolios	D	C, P	S	Variable	provides the students with a clear record of their work and growth; best evidence of growth and change over time; students can display skills. knowledge, and abilities in a way that is suited to them; promotes self-assessment	Time consuming to grade; different content in portfolio makes evaluating difficult and may require training; bulky to manage depending on size
Exit Surveys	D and I	A	S	ASE	provides good summative data; easy to manage data if Likert-scaled responses are used	Likert scales limit feedback, open-ended responses are bulky to manage
Performance	D	C, P	F or S	Variable K, C, A, ASE	provides best display of skills and abilities; provides excellent opportunity for peer review; students can display skills. knowledge, and abilities in a way that is suited to them	stressful for students; may take course time; some students may take the evaluation very hard - evaluative statements must be carefully framed
Capstone project or course	D	C, P , A	F orS	ASE	best method to measure growth overtime with regards to a course or program - cumulative	focus and breadth of assessment and understanding all the variables to produce assessment results are important; may result in additional course requirements; requires coordination and agreement on standards

Tool	Method D= Direct I= Indirect	Domain C= Cognitive P= Psychomotor A= Affective	Usage Type F= Formative S= Summative	Bloom's level K= Knowledge C= Comprehension A= Application ASE= Analysis or Synthesis or Evaluation	Pros	Cons
Team Project	D	C, A	F or S	Variable K, C, A, ASE	connects general education goals with discipline- specific courses	must fairly grade individuals as well as team; grading is slightly more complicated; student interaction may be a challenge
Reflective self-assessment essay	D and I	C, A	S	ASE	provides invaluable ability to evaluate affective growth in students	must use evidence to support conclusions, not just self-opinionated assessment
Satisfaction and Perception Surveys	I	C, P, A	S	C, A, ASE	provides good indirect data; data can be compared longitudinally; can be used to determine outcomes over a long period of time	respondents may be influenced by factors other than those being considered; validity and reliability most be closely watched

Assessment Tool Checklist	Check
1.　Does the assessment adequately evaluate academic performance relevant to the desired outcome? (validity)	
2.　Does this assessment tool enable students with different learning styles or abilities to show you what they have learned and what they can do?	
3.　Does the content examined by the assessment align with the content from the course? (Content validity)	
4.　Does this assessment method adequately address the knowledge, skills, abilities, behavior, and values associated with the intended outcome? (Domain validity)	
5.　Will the assessment provide information at a level appropriate to the outcome? (Bloom's)	
6.　Will the data accurately represent what the student can do in an authentic or real life situation? (Authentic assessment)	
7.　Is the grading scheme consistent; would a student receive the same grade for the same work on multiple evaluations? (Reliability)	
8.　Can multiple people use the scoring mechanism and come up with the same general score? (Reliability)	
9.　Does the assessment provide data that is specific enough for the desired outcomes? (alignment with outcome)	
10.　Is the assessment summative or formative - if formative does it generate diagnostic feedback to improve learning?	
11.　Is the assessment summative or formative - if summative, is the final evaluation built upon multiple sources of data? (AAHE Good practice)	
12.　If this is a summative assessment, have the students had ample opportunity for formative feedback and practice displaying what they know and can do?	
13.　Is the assessment unbiased or value-neutral, minimizing an attempt to give desirable responses and reducing any cultural misinterpretations?	
14.　Are the intended uses for the assessment clear? (Grading, program review, both)	
15.　Have other faculty provided feedback?	
16.　Has the assessment been pilot-tested?	
17.　Has the evaluation instrument been normed?	
18.　Will the information derived from the assessment help to improve teaching and learning? (AAHE Good Practice)	
19.　Will you provide the students with a copy of the rubric or assignment grading criteria?	
20.　Will you provide the students examples of model work?	

Kirkpatrick's
Four Levels of Evaluation

Level 4- Results

Key Question: Did the students achieve the desired outcomes of the programme of study?

Timing: Usually done 3 months-2 years after learning experience

Data Sources: participant/employer/advisor surveys, focus groups, interviews, concrete indicators, previous data

Level 3- Behaviour

Key Question: Are the newly acquired skills, knowledge, or attitude being used by the learner after the learning event is completed?

Timing: Usually done 1 month-3 months after learning

Data Sources: Level 2 re-assessment, participants/employer/advisor surveys, focus groups, interviews, previous data

Level 2- Learning

Key Question: Did the students achieve the desired learning objective(s)

Timing: Usually done immediately or soon after learning

Data Sources: tests, assignments, discussions, Q&A

Level 1- Reaction

Key Question: What was the student reaction to the learning environment?

Timing: Usually done immediately or soon after the learning event(s)

Data Sources: student surveys, focus groups, interviews, previous data

Kirkpatrick, D. (1994). Evaluting Training Programs: The Four Levels, San Francisco: Berrett-Koehler

NOTE: Quite often, EITHER Level 3 OR Level 4 is completed. Not always is it feasible or necessary to assess both levels. For a thorough exploration of the issues involved in assessment of Levels 3 and 4, see Kirkpatrick, D. & Kirkpatrick, J. (2005).

6

RESOURCES

Networks, Blogs, Articles, Websites

My Diigo Collection - https://www.diigo.com/user/runfardvs/flipped_classroom?type=all
The Flipped Class Network - http://flippedclassroom.org
Cycles of Learning - http://www.cyclesoflearning.com/
Flipped Learning - http://flipped-learning.com/
The Flipped Class Manifest - http://www.thedailyriff.com/articles/the-flipped-class-manifest-823.php

Webinar with Alan November and Dr. Eric Mazur - http://novemberlearning.com/webinar-with-alan-november-and-dr-eric-mazur/

Should You Flip Your Classroom - http://www.edutopia.org/blog/flipped-classroom-ramsey-musallam

No Such Thing As THE Flipped Classroom - http://chemicalsams.blogspot.com/2011/10/there-is-no-such-thing-as-flipped-class.html

To Flip or Not To Flip - http://www.brianbennett.org/blog/flipped-classroom-point

To Flip or Not To Flip - http://edudemic.com/2012/05/to-flip-or-not-flip-your-classroom/

The Truth about Flipped Learning - http://www.eschoolnews.com/2012/05/31/the-truth-about-flipped-learning/

Supporting Students in a #Flipclass - http://www.brianbennett.org/blog/supporting-students-in-a-flipclass/

Redesigning Learning in a Flipped Classroom - http://www.brianbennett.org/blog/redesigning-learning-in-a-flipped-classroom/

Khan and Beyond: The Many Faces of the Flipped Classroom - http://edublog.techsmith.com/2011/09/the-flipped-classroom---what-it-is-what-it-isnt.html

Ending the Tyranny of Lectures - http://www.eschoolnews.com/2011/07/27/ending-the-tyranny-of-the-lecture

Fizz: Flipping the Classroom - https://www.fi.ncsu.edu/project/fizz/

Active Learning Strategies - http://gsi.berkeley.edu/teachingguide/sections/active.html

http://scaleinstitute.com/

Universal Design Guidelines for Learning (UDL) - http://www.udlcenter.org/aboutudl/udlguidelines

 Open Innovation Revolution Across K-20 Education - http://open4us.org/resources/

Open Online Content
https://archive.org/details/movies
http://www.coursera.org/
http://www.edx.org/
http://oyc.yale.edu/
http://ocw.mit.edu/index.htm
http://florida.theorangegrove.org/og/access/home.do

Copyright for Educators:
http://www.edutopia.org/blog/film-festival-copyright-fair-use

Who Else is Flipping?
Aaron Sams - http://chemicalsams.blogspot.com/
Brian Bennett - http://brianbennett.org/
Dan Spencer - http://www.screencast.com/users/spend405/folders/MC%20CHEM
Stacey Roshan - http://techiemusings.wordpress.com/
Cheryl Morris - http://www.flippedlearningjournal.org/
Karl Lindgren-Streicher - https://sites.google.com/site/worldhistorywithls/
Tara Becker-Utess - http://ipadsforall.blogspot.com/
Dayson Pasion - http://mrdpasion.wordpress.com/
Heather Witten - http://spanishflippedclass.blogspot.com/
Jennifer Newitt - http://jnewbio.weebly.com/
Vincent DuBeau - http://delseamusic.com/

BIOGRAPHIES

Dr. Mary Clare DiGiacomo is the Dean of Academic Technology and First-Year Experience at Athens Technical College (ATC) in Athens, Georgia. Dr. DiGiacomo has nearly two decades of experience working in the distance education and instructional technology fields. Prior to her current position at ATC, she directed the distance learning program at Piedmont Virginia Community College. Faculty development as it relates to distance learning and instructional technology is one of her primary focuses, as well as overseeing student support for distance learning. She leads ATC's first-year experience initiative which resulted from a successful QEP effort in 2013. Dr. DiGiacomo holds a B.A. in Education from Stonehill College, an M.Ed. in Instructional Technology from Lesley University, and a Ph.D. in Community College Leadership from Old Dominion University.

Contact Information:
Dr. Mary Clare DiGiacomo
Dean of Academic Technology and First-Year Experience
Center for Teaching and Learning
Athens Technical College
800 U.S. Highway 29 North
Athens, GA 30621
mcdigiacomo@athenstech.edu
706-583-2760

Ms. Natasha Barreto is an experienced Instructional Designer with a strong background in computer-based multimedia instruction at Athens Technical College. Ms. Barreto has worked on Learning Object and Learning Object Repository development projects, face-to-face and online course design, high-stakes online assessment development, and ID/Development workflows, among other projects for career colleges, learning companies, and universities. Her focus is on the design of multimedia instructional messages. Ms. Barreto earned her M.Ed. in Learning, Design, and Technology from the University of Georgia and her B.S. in Communications from The Universidade Federal do Ceará, Brazil.

Contact Information:
Ms. Natasha Barreto
Instructional Designer
Center for Teaching and Learning
Athens Technical College
800 U.S. Highway 29 North
Athens, GA 30621
nbarreto@athenstech.edu
706-583-2732