

## **Florida Virtual School Course Development**

Teams of FLVS instructional staff developed every course in the FLVS program of studies. Trained in online learning theory and pedagogy—Gagne’s Nine Events of Instruction, Bloom’s Taxonomy Level II (analysis, synthesis, evaluation), and vertical teaming—the FLVS staff are the experts in the field of online instructional design. Each course undergoes a rigorous peer review process, incorporating formative reviews by subject matter experts and educators from around the country before it is released for student use. The first year a newly developed course is delivered it is done via a small BETA group of students. This BETA group allows for valuable feedback to be provided to the teacher. Based on the student feedback, modifications are made to the course before the next delivery cycle and full-scale release.

There are three pace charts in each course to help keep a student on track. Once the student selects a pace they are required to do a certain amount of work every week. This is monitored by the teacher to ensure that a student will complete the course on time. The traditional pace would have a student finish in 36 weeks for a 1.0 credit course.

FLVS curriculum designers provide a structure that engages students in real-world applications. Each course begins with a real-world motif or metaphoric construct, which places students in a specific role within the course theme. For example, in the American Government course, through a virtual tour of Washington, D.C., students connect to American Government concepts as they journey to different monuments and buildings. The course goal allows students to become politically active and learn how to access the governmental system while learning the importance of doing so. Projects include writing letters to senators, researching interest groups, and creating a persuasive product to support a political issue.

The FLVS program reflects a vision of educational reform that is consistent with the common recommendations of the National Curriculum Reports. These reports state classrooms should have less whole-class, teacher-directed instruction, e.g., lecturing and more experiential, inductive, hands-on learning. There should be less student passivity: sitting, listening, receiving, and absorbing information and more active learning in the classroom, with ... students doing, talking, and collaborating. There should be less time devoted to fill-in-the-blank worksheets, dittos, workbook, and other “seatwork” and more emphasis on higher-order thinking; learning a field’s key concepts and principles. There should be less student time spent reading textbooks and basal readers and attempt by teachers to thinly “cover” large amounts of material in every subject area and more deep study of a smaller number of topics, so that students internalize the field’s way of inquiry. There should be less rote memorization of facts and details and stress on the competition and grades in school and more time devoted to reading whole, original, real books and nonfiction materials. FLVS courses have been designed to address these national curriculum recommendations. For example, students in American History read a book *Ordinary Americans* in place of the typical American History textbook. *Ordinary Americans* is a collection of primary source materials written by ordinary citizens of America about significant events in history. For example, students read perspectives on

slavery from the point of view of a plantation master, an overseer, a slave and an abolitionist. To demonstrate synthesis of the issues students assume the persona of these historical figures and create diaries. Students are expected to use authentic language and references to events of the period. Another example from American History illustrates how students apply knowledge from the past to issues in the real world. Students consider the question of whether slavery exists today as they compare historical facts about slavery to the sweat shops in today's world. These are just two examples from our constructivist curriculum that have been intentionally designed to implement the recommendations of the national curriculum reports.

FLVS' academic expectations are high for all learners. Within the course design process, instructors are guided to develop coursework with a minimum of 60% Bloom's Level II, analysis, synthesis and evaluation.

Florida Virtual School is committed to providing accessible content for all users, including people with disabilities. FLVS courses comply with all Priority 1 accessibility checkpoints as established in the World Wide Web Consortium's (W3C) web accessibility initiative (WAI). FLVS continually strives to improve the accessibility of content by ensuring the content conforms to these accessibility standards.

To meet the goal of achieving the highest level of accessibility attainable, FLVS uses a variety of tools for validation, including screen readers and screen enlarging software. FLVS also engages accessibility experts and people with disabilities to further test our content usability. FLVS recommends Microsoft Internet Explorer 5.5 or higher and JAWS for Windows version 5.0 or later for best speech synthesis. Because FLVS courses are highly facilitated and individualized, adaptation for students with special learning needs are accommodated.

All Florida Virtual School courses meet the SREB Essential Principles of Quality. These are the same principles upon which the FLVS courses were developed and proudly we can state that FLVS assisted in the preparation of the document.

**Readability.** The readability target for FLVS courses is the actual grade level, not to exceed two additional grade levels, though there may be exceptions. For example, the 8th grade courses are targeted at the 8th grade reading level, but can have passages in them up to 10th grade. FLVS uses the Fleisch-Kincaid scale.

Use of the Flesch-Kincaid readability tool, which is a tool associated with general text (such as newspapers and mainstream publications), is easily accomplished by putting a passage into a word processing document and processing it for spelling and grammar.

The readability score gives general information about the reading difficulty or ease of a passage. The score is a quantitative assessment of surface characteristics such as the number of words and syllables, the number of sentences, and the general length of the passage. However, the tool does not take into account the qualitative factors that may influence the ease of reading such as vocabulary, density of concepts, organization and

presentation of content, and so on.

With these things in mind FLVS encourages the use of the readability tool to guide the overall level of writing within a course. Then based on that measure, the target student grade level, and concept presentation, FLVS should adjust the writing accordingly to meet the needs of the student reader.

### **The Readability Tool in Word**

(For explanation of how to adapt to specific needs and explanation of how scores are arrived at: <http://mbam.pepperdine.edu/resources/writinglab/read.cfm>)

To check readability:

1. Open a course and F12 a page to bring the page up in a browser window.
2. Copy a paragraph
3. Open a Word document and paste the excerpt into the doc.
4. Highlight the paragraph
5. Choose Tools, Spelling and grammar and a gray text box will pop up with both reading ease and grade level.

## **Part 4. Processes**

All FLVS courses have been developed by a team of FLVS teachers via the leadership of the Application Development Team. While FLVS courses are never “finished” in that they are in a continuous refresh and redevelopment process, they initially undergo a thorough development and review process. A course development project team consists of a project manager (PM), curriculum specialist (CS), and team of teacher experts.

### **New Course Development Review Process**

FLVS courses go through a review at the completion of Module One, at the completion of 30% of the course, and again at the completion of 70% of the course. The process is as follows:

1. The project manager (PM) contacts the curriculum specialist (CS) in charge of the course to ask for the review to begin.
2. The CS assembles a team, consisting of the following personnel, to review the course:
  - a. Project Manager
  - b. Curriculum Specialist in charge of the course
  - c. Application Development Specialist (ADS) in charge of the course
  - d. One additional reviewer as needed, preferably a subject matter expert
3. The team uses the FLVS Review Instrument to complete the course evaluation.
4. The CS sets a date for independent reviews and have the documents submitted to the CS. After the CS has gone through the docs, a meeting is called.
5. The CS gathers creates a summative report of the teams’ evaluation.
6. The summative report is emailed to the PM and all other members of the review team and placed in Course Tracker, a development database.

7. The CS then follows up with the Developer and the ADS to assist in the implementation of the necessary revisions as needed.
8. The CS emails the PM at the completion of the revisions, signaling the end of that course review cycle.

### **New Course Development Process**

When new FLVS courses are being developed, the following guidelines are followed by the development team:

1. Review other FLVS courses.
2. Generate the Big Idea/Plan
3. Identify a motif (metaphoric construct).
4. Research distance learning sites.
5. Develop a scope and sequence, tying together the motif, real world connections, learning models, lessons, and standards.
6. Collaborate with colleagues in reviewing scope and sequence, motif, and course map.
7. Create a project plan for course development
8. Research software and resources
9. Create and send course description, syllabus, materials needed, etc., to Curriculum Specialist.
10. Develop first content module
11. Continue module-by-module development and review process as outlined in Project Development Plan.
12. Review project completion
13. AP courses designed according to the College Board's framework for AP courses.

### **Course Updates:**

All instructors, adjunct and full time, play a valuable role in seeing that the course they teach is accurate and functioning properly. If a link is down, directions need to be changed, or some other issue needs to be addressed, corrections are reported to support@flvs.net for:

- replacing addresses for websites that go down
- making changes to lesson directions
- correcting typographical or grammatical errors
- assessment changes

The “update” database generates a ticket which is directed to the individuals who need to review and implement changes before the ticket is officially closed.

### **Pedagogical Frameworks**

FLVS believes strongly in building courses on research-based theory and practice and courses are built upon the following:

- Bloom's Taxonomy
- Gagne's Nine Events of Instruction
- Learning Styles and Multiple Intelligences

- Keller – ARCS Motivational Model
- Susan Kovalik and Integrated Thematic Instruction
- 21st Century Learning
- Student-to-Student Interaction Information

Bloom's Taxonomy focus on the *Three Domains for Learning* which are:

1. cognitive - mental skills (Knowledge)
2. affective - growth in feelings or emotional areas (Attitude)
3. psychomotor - manual or physical skills (Skills)

The cognitive domain encompasses:

1. Knowledge
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation

FLVS courses strive for 60% of each module to address the higher levels (Analysis, Synthesis, and Evaluation) of Bloom's Taxonomy.

**Gagne's nine events of instruction** provide a model around which most FLVS lessons can be designed. Though not every event will be found in every lesson, using the events of instruction as a model will help a course designer build a lesson with student learning in mind at every step.

Although much FLVS course presentation is visual and textual an effort is made to address all learning styles: visual, auditory, and kinesthetic. Examples of this are:

1. Include hands on activities such as labs and exercises where students get to act out or investigate the concepts apart from the computer.
2. Use audio clips and video clips to address the visual/auditory.
3. Use interactivities that engage the learner in "doing."

### **Multiple Intelligences**

Using Gardner's theories, FLVS courses address the ways in which students demonstrate their intelligence. In his 1983 book, *Frames of Mind*, Howard Gardner revealed his Theory of Multiple Intelligences, which proposes, "people use at least seven relatively autonomous intellectual capacities to approach problems and create products":

1. linguistic
2. musical
3. logical-mathematical
4. spatial
5. bodily-kinesthetic
6. interpersonal

## 7. intrapersonal intelligences

End of module assessments or an activity for an individual lesson will allow students multiple means of expressing their understanding of a concept in a particular unit by allowing a brochure, a poster, a PowerPoint, a concept map, a song, a video presentation, a script for a radio broadcast, designing an experiment, etc. as a product to show mastery of a standard.

### **The ARCS Model**

Within this model there are four essential strategies for motivating learning:

1. **[A]ttention strategies** for arousing and sustaining curiosity and interest;
2. **[R]elevance strategies** that link to learners' needs, interests, and motives;
3. **[C]onfidence strategies** that help students develop a positive expectation for successful achievement; and
4. **[S]atisfaction strategies** that provide extrinsic and intrinsic reinforcement for effort.

### **Communication and Interaction**

One of the core beliefs of FLVS is that students learn best when they, their instructors, family, peers, and community members interact as facilitators of learning and share responsibility for student success. It is with that in mind that our courses have been developed with many types of communication in mind.

In an effort to bridge the gap between traditional classroom interaction and the singular virtual environment, FLVS has implemented the use of student chats and discussion boards. Students need to communicate with their peers as well as their instructors. Various assignments have been designed to encourage students to work with others in the course.

Working with others is often accomplished by using discussions that tend to be asynchronous because of the nature of our virtual world. Students access assignments at different times, responding to comments created by others in the course. In certain courses, students must contact other students in order to create a group project; the discussion board is one way they can communicate. In addition, email between students is often used.

Chat rooms provide another venue for student-to-student communication. Chats vary from course to course. Students are sometimes expected to come prepared to focus on the assigned topic. In a given course, there may be chat sessions that focus on particular concepts, scheduled at varying times to accommodate various needs. In other courses, a chat may be informal, just an open forum to discuss general issues. Parents are sometimes involved in virtual “open houses” via the chat room.

One of our extra-curricular clubs, the student-produced online newspaper, utilizes the chat feature on a monthly basis. On a designated date and time, students meet

synchronously to discuss articles for upcoming issues. This monthly chat produces a sense of staff unity in an otherwise singular environment.

Good learning takes place when students get to interact with other students. Communication among students is therefore a priority in FLVS courses.

### **Accommodations for Students with Disabilities**

In order to create courses that are accessible to students with disabilities, the courses must meet certain standards. Florida Virtual School is aware of the common issues that arise for these students and works to implement the standards created through the American with Disabilities Act, Section 508. When developing a course, developers will work hand in hand with the Development Team to ensure that accessibility requirements are met.

### **Course Refresh, Redevelopment, and Enhancements**

Course refresh is a light modification of a course each year. The course does not have to be reshaped, but some minor alterations are necessary due to changing information, feedback from students on lessons that require more assistance, or new resources. The modification focus and quantity is determined by the Instructional and Development teams each year.

Course redevelopment occurs if a large number of modifications are needed for a course. The modifications to the course would be at a scope level that involves either a comprehensive updating of a course or a complete rewrite of the course.

The goals for Course Refresh in 04-05 were focused on integrity issues. All exams now include scrambled question banks to ensure that every student will have a slightly different test. The oral quiz element in every other module, beginning with Module 2, provides teachers another method for proving that students are doing their own work—as well as another point of contact with students.

Course enhancements for existing courses have traditionally been made based on need. For example, if a resource interactivity that taught a central topic in a course ceased to exist and no alternatives could be found, interactivities would be created. FLVS is committed to adding interactivities to courses each year.