Principles of Learning in the Middle School Latin Classroom

The initial reaction of many secondary teachers to "Missing the Heart-Shaped Piece" by Rob Hardy (*Classical Journal,* April-May 2005;Vol. 100, No.4) was not a favorable one. It hit very close to the unspoken but often assumed hierarchy in education in classics: if you truly have talent, you become a professor; if you do not have quite what it takes to be a professor, you become a high school teacher; and if you do not have what it takes to teach even high school but you still love Latin, then you can at least manage middle school without doing much harm. This prejudice is not necessarily malicious nor intentional, but it is ubiquitous. When I was acting as a consultant at a teacher in-service in Virginia in fall of 2004, it was clear that some of the teachers doubted whether I, a middle school teacher, could possibly have much to offer teachers who regularly taught AP Latin courses. Fortunately I changed this view as the day progressed.

## The Distractors

Several questions were raised in Hardy's article, among them whether there is too much testing in education. Let us throw in whether parents are too permissive, whether students play too many computer games or read too little. We can also concern ourselves with raging hormones, pregnancy, drug use and even gang involvement.

And what of the accusation that there are too many games played in the secondary Latin classroom and the lack of intrinsic motivation for study and accomplishment? Yes, there are unfortunately classrooms where fun and games dominate and serious learning is all but absent in order to appease the students that are, by law, *required* to be in school. We can all name at least one program like that. Likewise, there are plenty of beginning Latin classes at the university level that are poorly attended even if fully enrolled—an equal demonstration of an inability to instill enthusiasm and foster intrinsic motivation. It just looks different at the university level.

But after we have exhausted ourselves pointing fingers at all the ills in education, the bureaucracies, the legislators, and the rest, we need to stop and ask ourselves just three questions: 1) What is out of my control?  2) What is within my control?  3) And if it is within my control, what can I do about it?

Out of my control would be issues involving testing, parental involvement, hormones, pregnancy, drug use, gang involvement, and what a few less able teachers do in their classrooms—therefore they are not worth discussing. They are *distractors* that prevent us from seeing where the true problems are. Almost everything else that goes on in my classroom *is* within my control, even the majority of behavioral issues which scare too many instructors away from the secondary classroom, especially the middle school classroom.

Cognitive Development & Latin Pedagogy

The problems of quality teaching at the secondary level begin with two key things: 1) a lack of understanding of cognitive development and how it applies to Latin, and 2) a lack of a thorough grounding in Latin pedagogy. That is, you cannot simply teach in the same manner as your Latin teacher taught nor can you merely act as a *facilitator* for your textbook. A facilitator is nothing more than a glorified guide who can regurgitate what is already stated in the textbook and answer additional questions when asked. Facilitators cover chapters, they do not teach Latin. If students fail to demonstrate the desired level of mastery, facilitators often blame the design of the textbook or some issue with the students, but never their own teaching skills because they erroneously equate their own knowledge of Latin with an ability to teach.

The true key here is that *there is no magic textbook*. There are talented, well-trained instructors who know how to truly teach versus poorly-trained instructors who are really nothing more than facilitators (although with training they could be much more). Textbooks are *tools* that can be used well or poorly. Some instructors will prefer a different tool than others. One thing is certain, though: a truly good instructor with a solid foundation in Latin pedagogy can teach from any textbook and would never, ever blame the tool.

But before looking at specific pedagogical issues, let us turn our attention to Bloom's Taxonomy and cognitive development. Consider the attached table which comes from the University of Victoria.[i] In dealing with students, especially young students, it is often beneficial to consider these six graduated categories of intellectual skills or abilities: knowledge, comprehension, application, analysis, synthesis, and evaluation. These range from the simplest of mental tasks (*knowledge*: rote memory = simple vocabulary acquisition, morphological endings, etc.) to more complex tasks (*synthesis*: building structure or patterns from diverse elements = combining vocabulary and morphological endings, phrasing, etc. to create meaning). Unfortunately, many Latin teachers do not consider the graduated intellectual skills in between. Students either make the jump to reading Latin because they have already developed the mental agility needed, or they are weeded out of Latin programs and labeled incapable of learning. If, however, we want all middle school students to succeed (and not just the ones maturing at a faster rate than the others), then we need to break down the teaching of Latin into tasks that include comprehension, application, analysis and synthesis. By doing so we can build up the muscles of the brain, so to speak, to create the mental agility and strength that is required for success in Latin.

I have always felt it important to teach morphological endings in context. With this in mind I developed a set of model sentences that contain only the nominative, dative and accusative cases of the first 3 declensions for use with Unit 1 of the *Cambridge Latin Course* to use instead of the traditional noun chart (which they know about but do not really use until all of the cases are mastered). These sentences are written by declension, include examples of present, imperfect and perfect tenses, and can be arranged in a chart as follows:

| NOM | DAT | ACC | VERB | |
|-----|-----|-----|------|--|
| ancilla | puellae | statuam | dat. | The slavegirl gives a statue to the girl. |
| ancillae | puellīs | statuās | dant. | The slavegirls give statues to the girls. |
| dominus | servō | ānulum | dabat. | The master was giving a ring to the slave. |
| dominī | servīs | ānulōs | dabant. | The masters were giving rings to the slaves. |
| māter | patrī | īnfantem | dedit. | The mother gave the baby to the father. |
| mātrēs | patribus | īnfantēs | dedērunt. | The mothers gave the babies to the fathers. |

When I realized a couple of years ago that a large number of my students still were not connecting morphological endings to syntactical function in a sentence, I created a worksheet that walked students through each of the levels of Bloom's Taxonomy.

For *knowledge*, students had to write out the model sentences. For *comprehension*, they had to explain *in their own words* how nominatives such as *ancilla*, *dominus* and *māter* functioned, how datives such as *puellīs*, *servīs* and *patribus* functioned, and how accusatives such as *statuam*, *ānulum*, and *īnfantem* functioned. For *application*, they needed to "decline" different nouns in these sentences. For instance, here is *umbra*:

| umbra | umbrae | umbram | dat. | The ghost gives a ghost to the ghost. |
|-------|--------|--------|------|---------------------------------------|
| umbrae | umbrīs | umbrās | dant. | The ghosts give ghosts to the ghosts. |

An alternate example of *application* would be to just substitute one word in the sentence at a time.

| umbra | puellae | statuam | dat. | The ghost gives a statue to the girl. |
|-------|---------|---------|------|---------------------------------------|
| ancillae | umbrīs | statuās | dant. | The slavegirls give statues to the ghosts. |

For *analysis*, students were asked to compare two sentences from the textbook (*spectātōrēs āthlētam laudāvērunt. servus Milōnī discum quaesīvit.*) with their model sentences, noting how they were the same and how they were different, and ultimately how learning the endings through memorizing the model sentences helped them to understand the Latin. For *synthesis*, students were asked to translate English sentences into Latin. (The woman was giving money to the friend. The slave is offering food to the guests.) And finally for *evaluation*, I asked students what they thought the purpose was of the model sentences, whether they thought them to be beneficial, what other ways they could organize the same information, etc.

By doing this worksheet, students began to see why some aspects of Latin were difficult for them. It also helped students make those connections which they sometimes could not make without guidance. Each aspect of teaching in the Latin classroom, particularly the middle school classroom, should be analyzed in respect to its cognitive level in order to understand hidden difficulties.

SANDALS & Reading

In *Latin for the 21st Century*, Rick LaFleur advises teachers to remember their
SANDALS while in Rome (i.e., your Latin classroom): *Spectāte Audīte Nunc Dīcite
Agite Legite Scrībite*. As I have written elsewhere, this acronym, SANDALS, is an
extremely useful guide for activities in the Latin classroom. It reminds us of all the basic
language learning skills, and in the order in which we naturally employed them as
children in learning our own native language—one first looks and listens to the target
language, then one speaks, follows directions/acts, reads and finally writes in the target
language.

I would like to emphasize here the importance of the oral component. Some middle
school students will have never learned to pronounce words phonetically and will have
great difficulty in breaking down roots, tense indicators and endings.[1] These seem basic
and obvious to us, but can be serious stumbling blocks for some. And if you have a
teacher who feels that oral Latin is unimportant or who is sloppy with his or her
pronunciation, the student will have even greater difficulty getting over these stumbling
blocks. Latin is an excellent tool for such students because the rules of pronunciation and
accentuation are predictable. In addition, correct pronunciation helps to fix the
vocabulary item in one's mind making what some consider words easily confused to be
words that should never be confused, such as *via* and *vīlla*—unless, of course, your
pronunciation is sloppy and you are pronouncing neither *via* nor *vīlla* correctly.

Because I believe that our goal in teaching Latin is to read Latin, I put most of my
emphasis on teaching reading skills while incorporating the other skills that complement
this ultimate goal. We often use reading cards (to prevent reading ahead in the
sentence/hunting the verb) or metaphrase sentences in order to emphasize reading in
proper word order and to read with expectation. Consider the following sentence one
word at a time:

> *Quīntus*: nominative, probably subject > Quintus verbed something.
> *Quīntus servō*: dative, probably indirect object > Quintus verbed something to the
>     slave.
> *Quīntus servō pecūniam*: accusative, probably direct object > Quintus verbed
>     money to the slave.

Before I provide the verb, anticipate several possibilities of what it could be. After all, we
read and listen with expectation in English which is often why we are able to finish our
spouses' sentences for them. We should teach our students to read with expectation in
Latin as well.

---

[1] The forthcoming issue of *CPL Online* will feature an article entitled, "Why and How Students Differ in
Their Ability to Learn Latin and What We Can Do About It," by Barbara Hill, Program Coordinator,
Modified Foreign Language Program, University of Colorado at Boulder. Hill details phonological
processing issues and describes effective ways to deal with them.

> *Quīntus servō pecūniam tradidit*: perfect tense verb > Quintus handed over money
> to the slave. (Were you expecting *tradidit*?)

Of course, one can also question students in Latin (*quis servō pecūniam tradidit*?). More
challenging and intimidating for some teachers would be paraphrasing the storyline in
simpler Latin. Substitution and transformation drills can be created that are based upon
sentences in the story so that learning Latin is kept as much as possible in the context of
reading it. All of these techniques and more are effective in teaching the target language,
but *impossible* to employ if you do not have control of your classroom, especially the
middle school classroom.

## Classroom Management and Structure

Classroom management often receives little attention when training to become a teacher
but can be the critical issue that makes or breaks a new teacher, especially in a middle
school environment. Many new teachers are often fooled into thinking that they are so
dynamic and have so many creative ideas that the students will be enthralled and thus
present no behavioral problems at all. This is arrogance and naiveté.

These are some of the problems encountered by middle school teachers:
>       students coming to class unprepared (no book, no folder, no pen, no paper)
>       students being tardy
>       students not being quiet when class needs to begin
>       students talking out of turn
>       students not in their seats
>       students not participating
>       students generally being disruptive

In other words, they are time-wasting activities which can easily eat up 10-15 minutes of
the 50 minute hour, which is a significant amount of instructional time if this is repeated
on a daily basis.  I also want to add that many of these behaviors are age-related and tied
to normal physical and neurological development, and are not necessarily a sign of
disrespect or lack of interest. Careful structuring of the class can combat these
disruptions, minimizing wasted time and maximizing instructional time. Students,
especially young students, function better in a well-structured classroom. I encourage all
teachers to study Harry Wong's excellent *The First Days of School* and to consider, as I
did, how to customize his suggestions to fit the needs of your classroom.  Here is how my
class is currently structured:

1. Students enter and check the bulletin board for jobs. Each row has a rotating job
   (*centuriō*) of getting student folders and warm-up spirals from the file drawer. No
   more than 5 students (1 each from 5 rows) will be at the file cabinet at any given
   time. Students may take folders home but in general they are left in the room.
   Besides 5 *centuriōnēs*, there is a *lēgātus*, who is in charge of the Time-Wasting

Spiral for the day, and the *tribūnus*, who is in charge of the bell.

2. At the bell all students begin to work on a warm-up on the overhead. They are all able to begin at the same time because they all have their spirals and pens are in a library pocket taped to the top of the desk. No one, therefore, can claim that he or she has nothing to write with. [I have effectively removed all excuses for off-task behavior from the very beginning of class.] While students are silently working on the warm-up, which might consist of conjugating a verb, identifying cases in the context of a sentence, or metaphrasing a sentence, I take roll on the computer. The warm-ups are always tied to the lesson and we always review it together. I give a check grade on their warm-up spirals which I review while students are taking tests. (Thus grading them does not take up my time outside of the classroom.)

3. After warm-ups we usually review current vocabulary using a large set of flashcards. (A variety of effective study techniques, such as drilling with flashcards, should be taught in the beginning Latin classroom.) This activity, combined with whatever was the focus of the warm-up, prepares students for the day's reading in the text.

4. Typically, we then proceed to the story in the textbooks. The books, like the folders and spirals, are kept in the room (under the desks) but can also be taken home. We practice prereading techniques such as looking at illustrations, discussing the title, reading/repeating the glossed vocabulary, and making educated guesses about the content of the story. I then read it to them completely and expressively. This is followed by our reading it together while I walk around the room and between the rows, listening to make certain that each student is reading. From there we might read it slowly, carefully noting morphology and metaphrasing if I wish to focus on certain constructions. We might translate it together. I might question them in Latin as we read through it again. Students might do a reading comprehension worksheet on the story in English. They might do a cloze worksheet with key words left out to focus on a new grammatical structure being learned. If students are doing written work, they will work as a cooperative group consisting of the students in their row. (More on this below.)

5. At any point during the class when there has been an off-task behavior, I have told the *lēgātus* to write the perpetrator's name down in the Time-Wasting Spiral. Thus I have a written account of behavioral problems but have not stopped whatever I am doing for more than a moment. Consequences include time after class, lunch detention, calling home, and ultimately a referral. Because students know I have a written, dated record, they are more inclined to follow class rules. Everyone gets a clean slate after three weeks and we begin again.

6. When there are five minutes left to go in class the *tribūnus* rings the bell. The *centuriōnēs* pick up folders and spirals (if the students do not wish to take them home) and put them in the appropriate file drawer. Pens are returned to the library

pockets on desks and books, if not going home, are placed underneath desks. I review the Time-Wasting Spiral and note the names of students who need to stay after class, I sign any grade sheets that need signing (for permission to take part in athletics), and check to see that the rows are in order. With any time remaining, I review the day's objectives or drill vocabulary.

7. When the bell rings I "send off" the students with a Latin phrase. I say it, they repeat it, I say the English meaning, they repeat that, and then I dismiss them with *"valēte omnēs."*

There are several important ideas here. First, I have effectively removed many of the excuses for young students being off task: not having spirals, folders, books and especially something to write with. Few students leave my classroom to go to their lockers. If a student does, in fact, take his/her folder or book home and fails to bring it back, his/her name is added to the Time-Wasting Spiral. Am I babying them by keeping their folders and books in my room and supplying pens on their desks? Perhaps, but the amount of time spent on-task this past year increased easily by 10 minutes or more per class and I rarely left school frustrated by student behavior or an inability to cover what was in my lesson plan. Students were engaged throughout the class, had *clear expectations* of what was expected of them from the moment they entered, and had little down time for fooling around because I structured the things I am required to do by law (take attendance, sign grade slips, etc.) during times when they were engaged in other activities (doing warm-ups, putting away folders and spirals, etc.).

Many of their written assignments are done in cooperative groups, as I said before. I find this reduces blatant copying and can dramatically increase the quality of the work turned in, from proper formatting and mechanics (the lack of which drives me crazy!) to closer attention paid to correct tense, case or number. Grades are individual and never group grades, although admittedly groups which finish first are often given chocolate.

There are typically four jobs:

> *lictor*: in charge of insuring that everyone in their group has a complete heading on their paper, followed the specified formatting, punctuated their sentences, etc.;
> *lector*, in charge of reading the Latin and the related questions;
> *vocābulārius/a*, in charge of looking up unknown vocabulary; and
> *grammāticus/a*, in charge of focusing on aspects of grammar/morphology

Along with these jobs students are taught how to ask appropriate questions. "What's the answer to number 2?" is not appropriate. But "Why is 'to the slaves' the correct answer?" is. This leads students to peer-teaching, explaining morphological endings to each other in their own words. What if the less-able student does not ask the question? Then the more-able student (i.e., the student that hates to be copied from) must ask "Do you know why 'to the slaves' is correct?" The ensuing discussion should include some information about the morphology of the word and perhaps even syntax.

Principles of Learning

At our school, understanding how to question and discuss the subject matter as I have described above is called *accountable talk*. Learning is as much about knowing how to ask the questions as it is about having the right answers. *Accountable talk* is part of the *Principles of Learning*,[2] an educational philosophy which my school district has adopted. It is an effort-oriented educational system as opposed to an aptitude-oriented system. That is, it embodies the idea that with sustained, systematic effort, all students are capable of high achievement and high-level thinking, regardless of their backgrounds; that effort can *create* ability. Other key ideas include the notion of *clear expectations*—insuring that all students understand exactly what the high expectations are and how to achieve those expectations. Most important is the notion of *academic rigor in a thinking curriculum*—a rejection of teaching in which the level of assessment never rises above the knowledge category in Bloom's Taxonomy.

Latin, of course, meets everyone's idea of academic rigor because of the complexity of an inflectional language. In the past this meant that only students who were already equipped to deal with high level cognitive thinking succeeded. I have found, however, that I can teach my non-A students the steps that the A students naturally take when dealing with, for example, taking a test. As a result I do provide extra credit for any demonstration of "effort" on tests in the form of notes in the margins and such, much like showing work on a math problem. This rewards the student in a small way for mastering knowledge level material (personal endings on verbs, tense markers, etc) and allows me to see where the disconnect is happening with the higher level thinking processes. The overall result is a substantial improvement in overall test-taking ability and greater confidence in approaching sight passages. Most of all, every student in the class knows that I am truly there to *teach* them every step of the way so that they *all* can meet the high expectations which are set.

Uselessness versus Utility

Hardy wrote in his article "I had a difficult time justifying Latin to my affluent students, who were under so much pressure to succeed…. I wanted desperately to spark in each of my students an interest in Latin for Latin's sake. I wanted them to appreciate it for its roselike beauty, not for its cabbage-like utility. I wanted my students to appreciate Latin's uselessness….Latin, I am convinced, is entirely unprofitable, as prairies and old-growth forests are unprofitable."

I can understand Hardy's point of view to an extent. Improved verbal SAT scores are the cabbage-like utility that we too often parade about in our defense of Latin. These are, however, the stats that will immediately appease the shortsighted student under pressure to succeed while you develop that interest in Latin for Latin's sake. But *uselessness*? Latin and the world that belonged to those Latin-speaking Romans provide the invisible

---

[2] More information on the Principles of Learning can be found at http://www.instituteforlearning.org/.

web that supports so many aspects of our western culture—law, philosophy, history, the sciences, political science, art, architecture, and more.

Knowing Latin means I can explain to my son why an *oviraptor* is so aptly named. Knowing Latin means I fully understand that someone pleading *nolo contendere* is not necessarily admitting guilt. Knowing Latin means I recognize that when a journalist writes that gorilla populations are being *decimated* that the journalist does not truly understand the meaning of *decimate*. Knowing Latin means I can read a menu in Spanish at a Mexican restaurant and not need someone to translate for me. Knowing Latin means I understand all of the Latin references, political and otherwise, in "The West Wing."

But this is not the sort of utility Hardy is after. This is still cabbage-like utility even if it is not Latin for boosting SAT scores or looking good on a transcript. The real reason to study Latin is to read what people who lived before us wrote, in their own words, expressing their own thoughts and emotions in exactly their own way. The real reason to study Latin is to read

> ōdī et amō. quārē id faciam, fortasse requīris.
>    nescio, sed fierī sentiō et excrucior.

and to empathize with the tortuous pain that Catullus was feeling. The real reason to study Latin is to read

> nōn amo tē, Sabidī, nec possum dīcere quārē.
>    hoc tantum possum dīcere: nōn amo tē.

and be able to laugh at Martial explaining that he just does not like Sabidus. The real reason to study Latin is to read

> Ecce autem geminī ā Tenedō tranquilla per alta
> —horrēscō referēns—immēnsīs orbibus anguēs
> incumbunt pelagō pariterque ad lītora tendunt;
> pectora quōrum inter flūctūs arrēcta iubaeque
> sanguineae superant undās;

and to appreciate that Vergil not only knew how to build suspense and terror but also used words to construct vivid pictures in the mind.

And yes, I have taught all of these passages—authentic Latin texts—in the middle school classroom. I have demonstrated to students that Latin is full of passion and beauty and humor and horror.

If Latin is useless, then so is Terry Pratchett or Stephen King. And so are our dashboard poets, the pop bands that many of us could not live without. The mind and soul need to be fed constantly, authors need to speak to us whether its from 2000 miles away or 2000 years away.  I want to read the power and terror of the sea serpents' attack in Vergil's

*Aeneid* as much as I want to read the haunting of Sara Laughs in King's *Bag of Bones*. I want I want to "hear" Catullus as much as I want to hear Aerosmith, Martial as much as Jimmy Buffett. I want and need to feed my heart and mind and soul. Who does not? And is that not enough to justify learning to read Latin?

### Further Reading for the True Teacher

There are two books that every teacher of Latin should own and that should be at the core of any methods course for Latin teachers. The first is Rick LaFleur's *Latin for the 21st Century*, which provides an excellent overview on a wide variety of topics, including:

> National Standards for Latin instructions
> Instructional approaches
> Latin in the elementary, middle and high schools
> Advanced Placement instruction
> High school/college articulation
> Historical overview of Latin instruction, methods and texts
> Resources for the Latin classroom

But for an excellent, in-depth look at Latin pedagogy independent of any textbook series, you need Paul Distler's extraordinary *Teach the Latin, I Pray You.* Chapters include the teaching of morphology, the teaching of vocabulary, teaching the reading of Latin, the art of questioning, review and spiral teaching, and more. In the preface, Distler says:

> Teaching is an art and possibly the greatest. It deals not with inanimate things such as clay or marble, color or sound, but is bent upon molding and shaping that which is alive and pulsating in the realm of the spirit. Hence its excellence as a vocation and its responsibilities.
>
> The exercise of any art is not achieved without a mastery of skills—skills that are generally acquired by hard work and study coupled with abundant practice. The art of teaching is no exception. Teachers too must work hard to acquire the skills that are consonant with their high calling.

When I read these words I am reminded that true teaching is a calling, and not a fall back position. It is a *calling*, the kind you can hardly explain to anyone who does not have the same calling. It is a calling that possesses you and obsesses you and challenges you in ways no other profession can.

And even though the level of Latin is fairly simple in the middle school classroom, being a truly good teacher at this level is rather complex and certainly not for those who cannot teach at higher levels. We are in charge of laying a solid foundation and nothing is more critical than that. If you come across a teacher who is unfortunately playing too many games and giving out too much candy (or a TA or professor whose classes are poorly attended though fully enrolled), ask yourself who educated that teacher and why that

teacher was not grounded thoroughly in Latin pedagogy and cognitive development—why the universities graduated yet another facilitator instead of a teacher.

## Rethinking Teacher Preparation

It is time that we as a profession recognize that there are great lapses in teacher preparation and begin to discuss frankly changes that can be incorporated and should be incorporated—and not at some indefinite point in the future but *as soon as possible*. NOW, in fact. We are losing teachers to retirement and do not have enough new teachers to replace them. We cannot afford to lose even one new teacher due to failures in the classroom from lack of adequate preparation, and, my friends, we have not been adequately preparing and training our teachers. And yes, many of these openings are at the middle school level.

The difficulty, admittedly, lies in how to train only one or two people per year adequately, how to cover all the authors that should be read before teaching AP Latin or IB Latin, and how to provide these future teachers with the skills necessary to teach effectively and efficiently from reading-based textbooks as well as more traditional grammar-oriented textbooks.

Begin by printing and distributing the brochure entitled "So You Want to be a Latin Teacher?" which can be found at http://www.promotelatin.org/futureteacher.pdf. It addresses issues such as reading and oral proficiency as well as Latin pedagogy, and is designed to be put in the hands of students as early as their freshman year. The books and articles listed in the brochure should become the core materials for any method course taught. Then consider suggestions made in "Teacher Prep: New Ideas, New Approach," *CAMWS Newsletter* Volume 14.3, Spring 2005, pp 9-12 (http://www.camws.org/News/newsletter/nwsltr14.3.pdf), for possible ways to meet the needs of future teachers without stifling the variety and range of courses taught at the university level. And finally, consider offering financial assistance to send those future teachers to an ACL Institute, a Cambridge teachers workshop, or even a Rassias seminar—anything that focuses specifically and intensively on classroom teaching or foreign language acquisition—*before* they graduate.

Ginny Lindzey, Porter Middle School, Austin TX
*Porter Middle School is a Title 1 public school where over 70% of the student body are on the free and reduced lunch program.*

[i] Bloom's Taxonomy *

Benjamin Bloom created this taxonomy for categorizing level of abstraction of questions that commonly occur in educational settings. The taxonomy provides a useful structure in which to categorize test questions, since professors will characteristically ask questions within particular levels, and if you can determine the levels of questions that will appear on your exams, you will be able to study using appropriate strategies.

| Competence | Skills Demonstrated |
|---|---|
| **Knowledge** | observation and recall of information<br>knowledge of dates, events, places<br>knowledge of major ideas<br>mastery of subject matter<br>*Question Cues:*<br>list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc. |
| **Comprehension** | understanding information<br>grasp meaning<br>translate knowledge into new context<br>interpret facts, compare, contrast<br>order, group, infer causes<br>predict consequences<br>*Question Cues:*<br>summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend |
| **Application** | use information<br>use methods, concepts, theories in new situations<br>solve problems using required skills or knowledge<br>*Questions Cues:*<br>apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover |
| **Analysis** | seeing patterns<br>organization of parts<br>recognition of hidden meanings<br>identification of components<br>*Question Cues:*<br>analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer |
| **Synthesis** | use old ideas to create new ones<br>generalize from given facts<br>relate knowledge from several areas<br>predict, draw conclusions<br>*Question Cues:*<br>combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite |

| Evaluation | compare and discriminate between ideas<br>assess value of theories, presentations<br>make choices based on reasoned argument<br>verify value of evidence<br>recognize subjectivity<br>*Question Cues*<br>assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize |
|---|---|

* Adapted from: Bloom, B.S. (Ed.) (1956) Taxonomy of educational objectives: The classification of educational goals: Handbook I, cognitive domain. New York ; Toronto: Longmans, Green.

(http://www.coun.uvic.ca/learn/program/hndouts/bloom.html)