Mastery Learning - A Pedagogy for Leveraging Technology in Teaching NT Greek Grammar

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Abstract: This paper describes an implementation of the mastery learning approach in teaching Greek grammar. Tools and techniques designed specifically for mastery learning are described along with methods for formative assessment. The role of the teacher as coach and motivator is clarified as well as methods used to provide corrective feedback. Finally, this paper provides statistical results from a pilot program that demonstrate the effectiveness of the approach.

Keywords: Greek grammar, mastery learning, language acquisition

Introduction

The Problem

Those teaching New Testament or *Koine* Greek face several problems. First, many students are not well prepared for language acquisition. They find it difficult to learn the ancient languages because of the extensive amount of memorization that is required. Today's educational system, especially the American system, has de-emphasized memorization and so students are ill prepared for the challenge. Additionally, students often lack a thorough grasp of English grammar. This has resulted in high dropout rates and low performance in Greek classes.

This is complicated by the fact that many colleges and seminaries have reduced the number of hours allotted to language acquisition or have moved away from true language acquisition, teaching tools courses instead. Both approaches are sourced in the belief that full language acquisition is too difficult, too time-consuming, and results in too little benefit. Often it is suggested that pastors rarely use the ancient languages in sermon preparation, relying instead on quality modern translations, exegetical commentaries, and computerized tools.

Mastery Learning - A Proposed Alternative

Rather than abandoning the goal of true language acquisition in favor of less intense tool courses, what is needed is to discover a better way to learn language, a way that will help students overcome their lack of readiness for memorization and understanding of grammar; that will be more efficient, allowing full language acquisition to occur in less credit hours; and that will thoroughly prepare ministry students so that they will employ Greek reading and exegesis skills throughout their ministries.

Mastery learning may be that better way. Mastery learning approaches in use today have their roots in the works of Benjamin S. Bloom (Bloom 1968) and John Block (Block 1971). Bloom postulated that if the learning process would incorporate the techniques used in tutoring, nearly all students could reach high levels of achievement. He observed that tutors first tested students to determine learning levels and to diagnose problems. They next formulated corrective prescriptions which after being applied led to a second test to assess progress. This process was repeated until the student mastered the material. Bloom incorporated the testing which he called "formative assessment" and the corrective prescriptions which he called "formative assessment" and the mastery learning strategy. This process is illustrated below (Figure 1).



Figure 1. Mastery Learning Process

Mastery learning differs from traditional learning approaches in that its goal is for students to master content rather than simply being exposed to it. Subjects are divided into small discrete sequenced units that can be easily mastered. Students progress from unit to unit only by demonstrating mastery of the prior unit. This mastery approach is self-paced, allowing students to repeat learning and assessment activities until they demonstrate mastery. Thus, the learning process is very individualized.

Formative assessment must be distinguished for summative assessment. Summative assessment is designed to discover how much a student has learned for the purpose of certification. That is, it is designed to provide a final grade. Formative assessment is designed to determine progress in learning and provide corrective feedback. As such formative assessment must be repeatable, rarely is used to determine a student's grade, and should provide extensive feedback. On the other hand, summative assessment is designed to determine a grade, is rarely repeatable and may provide no feedback. Thus, in mastery learning a student will work through several small units of study using the mastery cycle and then some summative assessment will occur, covering several units that are grouped into a larger learning objective. Below is an illustration of combining a set of mastery units into a larger learning objective with summative assessment (see Figure 2).

| Unit 1 | Unit 2 | Unit 3 | |
|--|--|--|-------------------------|
| Formative Assess 77 Practice Correctives | Formative Assess Practice Correctives | Formative Assess Practice Correctives | Summative Assessment |

Figure 2. Large Learning Object Navigation

This paper will describe an implementation of the mastery learning approach in teaching New Testament Greek grammar online, will provide statistical results from a pilot program run during the 2013-2014 academic year, and will include both positive and negative insights gained from the study.

Mastery Learning Pedagogy

Mastery learning, as the name implies, focuses on attaining mastery of the subject. This differs from attaining a grade. Grades reflect the level of progress but do not require the student to demonstrate expertise. As a result, students who do poorly on a unit are not required to go back and master that unit. The normal recommendation is simply to do better on the next unit to obtain a passing grade. This approach is quite flawed when used in language acquisition courses since successive units are built upon prior units. So, students who do not attain mastery of early units find themselves building upon a very unstable foundation that will eventually crumble under the pressure of the new units. In Mastery learning students move on to new material or units of study only after they have demonstrated mastery of the current material or unit. As a result students build upon a stable foundation. Thus, the goal is attaining mastery of the material, not in attaining a grade.

Mastery learning also differs from the traditional learning approach in that it is self-paced. Traditional learning occurs within a very rigid time frame. Due dates and deadlines dominate the learning schedule. If a student fails to learn the material within the allotted time frame, no procedure is intentionally built into the learning process for the student to gain this learning. No provision is made for differences in student pace. The course simply moves on with no provision for some to progress faster and others to progress slower. In the mastery learning approach there are no due dates or deadlines. Students learn at their own pace and are not permitted to move on to new material until they demonstrate mastery on the current material. Thus, focus is placed on learning the material, not on getting through the material. One is finished with a unit of study only when that unit has been mastered. Those who need less time to master the material move more quickly and those who need more time move more slowly. Course designers no longer ask, "How long will it take to cover this material?" Instead they ask, "How can we know when the material being covered is mastered?"

Mastery Learning Design Processes and Specifications

Since mastery learning courses have a different pedagogy than do traditional courses, they also must have different design processes and specifications. One might say that the syllabus for a mastery-based course is going to be quite difference from the syllabus of a traditional course. The differences accommodate the self-paced, repetitive, mastery-based characteristics of mastery learning. The design processes and specifications are described below.

Mastering a unit is repetitive and recursive rather than purely sequential. The process begins with learning activities followed by assessment. If there is a learning problem, appropriate prescriptions are suggested. This is repeated in a recursive fashion until mastery is attained. This requires repeatable learning activities. Thus, viewing lectures and completing learning exercises must be repeatable. Lectures must be captured so that students can view them again and again. Exercises must be extensive enough so that they can be completed multiple times without redundancy. Along with this, learning activities should provide the student with formative assessment that is timely. For instance, understanding of lectures should be immediately assessed through a quiz which provides immediate feedback. Learning exercises should also provide immediate feedback. Traditional class standards for return of feedback are far too slow. Students should not be waiting days to find out if they are learning.

Mastery learning also requires repeatable means for demonstrating mastery. Assessment tools such as quizzes and correction of exercises must be extensive so that each repetition provides fresh assessment. Thus, quizzes will require a large test bank of questions so that each iteration of a quiz has different questions. Likewise, exercises should provide new examples and tasks for each iteration.

Additionally, a mastery-based course must include processes for tracking performance and restricting access to new material until the current unit of study is mastered. Along with restricting access, performance tracking should be able provide assistance to students who fail to gain mastery by pointing them to helpful information and suggesting ways to gain mastery over the material. It should also have the means to alert facilitators about students who are progressing at less than average pace.

Implementation

During the 2013-2014 academic year, 10 graduate students at Lancaster Bible College participated in a pilot program that employed a mastery-based pedagogy for learning first year New Testament Greek grammar. The program included two courses, each three credits. The syllabi for these courses are found at the end of this report. The courses were fully online and were designed to fit into a traditional 15 week semester. However, students were aware that extensions would be given for those who did not complete the courses by the proposed completion dates.

Moodle – Learning Management System

The courses were implemented using the Moodle learning management system. Moodle is an open-source LMS and is used at Lancaster Bible College. LBC partners with Moodlerooms and uses its add-on features to Moodle. This implementation made extensive use of the Moodlerooms *Personal Learning Designer*, whose capabilities may not be available in other Moodle installations. The Personal Learning Designer provided the means for tracking progress, restricting access to new materials until the current materials were mastered, and alerting both students and facilitators to student progress.

Course Structure

In each course the material was grouped into 15 units. In turn these units were grouped into 3 proficiencies per course. Students progressed from unit to unit and then when all units for a given proficiency were mastered, they took a proficiency examination. All learning and formative assessment activities within a unit were repeatable. However, proficiency examinations were not repeatable. These represented summative evaluation and were the exclusive basis for the student's final grade, the average of the three examinations. Each unit included several tools for acquiring information and then several steps for developing and demonstrating mastery.

Tools for Acquiring Information

Acquiring information was accomplished by reading the textbook and viewing three videos: a Vocabulary Lesson video, a Grammar Lesson video, and a Reading the Greek New Testament video.

The Textbook

The textbook used in the courses was developed specifically for this program for several reasons. First, a better pedagogical scope and sequence was needed than that found in existing grammars. One important goal was to have students reading full sentences as quickly as possible. So, it was necessary to introduce verbs very early. The sequence for vocabulary also was critical and many other grammars lacked a sequence that clearly complimented the grammar material. The grammar also needed to have an appropriate number of units. The scope and sequence of the courses became the scope and sequence of the book. It was also important that the book reflect the learning objectives of the course, which placed more emphasis on syntax and translation than did



most existing beginning grammars. Finally, since so much time would be spent in developing the complimentary learning tools and activities, it was essential that the grammar be stable with minimal changes over the years. The grammar, "A Beginning & Intermediate Grammar of New Testament Greek" by Dr. Harold A. Kime, is available in print online at Amazon.com.

Video Lessons

The vocabulary and grammar lesson videos were developed using audio over PowerPoint saved in an MP4 video format. This provided students with an easy way to navigate the videos quickly and to access them via computer or mobile devices. These videos employ a deductive learning technique with a focus on the material to be learned in the unit. They were directly mapped to the material found in the grammar textbook. The *Reading the Greek NT* videos include audio over captured computer screen interaction via Camtasia. These videos involve reading and discussing passages found in the Greek New Testament using the Logos Bible Software. Passages were selected based on how well they illustrated the parallel material found in the grammar textbook. However, the videos are more inductive, providing students with exposure to material that



would be learned later, with reinforcement for material already learned, and with motivation as they experienced the fruit of their efforts in reading and understanding the Greek New Testament.

Tools for Developing Mastery

The processes for developing mastery include extensive use of online interactive drills using the Byki Language Learning software and translation assignments.

Byki Language Learning Software

The Byki Language Learning Software is a flash card oriented system developed specifically for language acquisition. Using Byki replaces the use of printed workbooks. Unlike workbooks, Byki is more interactive, provides for many more examples, allows for repetitive learning, is portable, tracks progress, and requires no faculty intervention. It also supports text, audio, and graphics. Flash cards are organized into lists. Nearly 150 lists were developed for this pilot program with an average of 30 cards per lists. The student software is free and the development software is very inexpensive. Lists exist for learning



vocabulary, parsing forms, translating phrases, translating simple sentences, and translating complex sentences.

Translation Assignments

Each unit includes a translation assignment in the form of a story containing several paragraphs. The primary function of these translations is to assist the student in attaining mastery of the syntax and translation of Greek forms. The story format provides a context for making syntactical decisions that often cannot be duplicated by individual sentences. These stories attempt to simulate New Testament Greek yet at the same time avoid constructions that the student is not yet prepared to handle. The student submits a translation, which is then corrected by the course facilitator and returned with 72 hours. If the student has sufficient mistakes that indicate mastery does not exist, the student will receive feedback from the facilitator and must resubmit the translation. This process of submission, correction, feedback, and revision continues until the translation does demonstrate mastery.



Tools for Demonstrating Mastery

The processes for demonstrating mastery included taking quizzes and revising translation assignments.

Translation Assignments

As described above, translation assignments involve translating short stories, which in turn are corrected by the course facilitator. The facilitator then provides feedback to the student, suggesting items that need to be corrected, where to go for more help, etc. Only when the assignment is sufficiently correct is the student awarded a grade of mastery by the facilitator.

Online Quizzes

Quizzes function primarily as an assessment tool but can also be used as a learning tool. Quizzes knowledge of vocabulary, parsing. assess translation, and syntax rules. Vocabulary, parsing, and syntax questions are computer graded and provide immediate feedback. Translation questions are self-corrected. In these questions the student is shown a Greek sentence or phrase to translate. The student then enters an answer that is recorded and locked by the quiz. Then, the student is presented with a valid translation and asked to compare by means of a basic rubric his or her

| Parse the follo | wing Ve | rbal Form | s | | |
|-----------------|---------|-----------|------------|--------|--------|
| | Tense | Voice | Mood | Person | Number |
| εύαγγελίζομαι | Present | - | Indicative | | • |
| λέγεται | Present | | Indicative | | • |
| σώζεσθε | Present | | Indicative | | • |
| άποκρίνη | Present | | Indicative | | • |
| κρίνομαι | Present | - | Indicative | - | • |
| έξέρχεται | Present | - | Indicative | - | • |
| βλεποῦσι | Present | | Indicative | • | • |
| άπερχόνται | Present | • | Indicative | | • |
| έγείρομαι | Present | | Indicative | | • |
| έρχόμεθα | Present | • | Indicative | • | • |

translation with the one given. The response is then entered and transformed into a numeric grade that awards partial credit based on the student's self-evaluation. Facilitators have the ability to review translation questions to determine if students are self-grading these

questions appropriately. However, since quiz grades are used only to assess progress, students would only be harming themselves to inflate their assessments. Quizzes can be taken any number of times until the student demonstrates mastery. This requires an extensive test bank of questions so that students do not see the same questions on later iterations.

Useful Feedback

In traditional courses students are motivated by deadlines and due dates and to some degree by grades. However, in mastery-based courses there are no fixed deadlines and no grades. So, motivation must be generated through feedback that is motivational, instructive, and consistent.

Surface Feedback

Students receive immediate feedback from the Byki drills and quizzes. But this feedback is limited to providing students with the knowledge that they were correct or incorrect and whether or not they attained mastery. Such surface feedback provides limited help when students are incorrect or fail to master the material. What is needed is feedback that provides general encouragement to press on, and feedback that provides instructive help, either by restating or explaining the information that is being learned, or by informing the student

where to go to get the information. These courses provide this more useful feedback in several ways.

Instructor Translation Feedback

As mentioned above, when a student submits a translation, the facilitator corrects it and sends feedback to the student. At this point the facilitator is functioning as a teacher and can provide a tremendous amount of informative feedback to the student. Since the student must resubmit the translation with appropriate revisions, these comments become instructive. The facilitator can be confident that extensive comments will be noticed by the student.



Automated System Feedback

Along with the personal feedback that a facilitator provides on translations, the system includes automated feedback for both quizzes and translations. If a student fails to attain mastery on either, the system will automatically generate a feedback popup that helps the student in the learning process. Such feedback is more general than that provided by the facilitator but still specific enough to deal with most situations. It explains where to find help, provides learning strategies, and specific corrective help. This type of feedback is generated using Moodlerooms Personal Learning Designer. Using this



- that a word can have different meanings in different contexts.
- Check your parsings carefully.
- Consult your grammar for special rules of syntax.

tool, you can create very extensive processes for providing feedback and even direct links for the student to learning activities.

Mastery Level

For these courses, mastery is recognized for an assessment at or above 85%. On quizzes, mastery is determined mechanically based on automatic correction by the Moodle quiz module. For translation assignments, mastery is determined by the facilitator using a holistic assessment approach. However, to make it easier for the system to determine mastery, even this holistic grading used a numeric scale with 85% or above indicating mastery.

Assessing fully mastery of Greek Grammar for the sake of this pilot study was based on the average of the grades for the six proficiency examinations. This average is considered to be the summative evaluation of how well the student has mastered Greek grammar.

Pilot Study Findings

Assessing Final Mastery

Assessing final mastery in Greek Grammar for the sake of this pilot study was based on the average of the grades for the six proficiency examinations divided evenly between two courses: BIB 515 Greek Grammar 1 and BIB 516 Greek Grammar 2. This average is considered to be the level at which the students were working overall at the end of their studies. The goal was to have all students achieving a mastery goal of 85% or better. Data for the two classes is summarized below in Table 1 and Table 2.

All students successfully completed the two courses with 9 out of 10 reaching the mastery goal of 85%. The one student who did not reach that goal came quite close with a final average of 82.83. However, even this score equated to a final letter grade of B-. It seems reasonable to say that the mastery-learning approach did result in very high levels of overall mastery in Greek.

When individual proficiencies are examined, it can be seen that most students gained mastery in all segments of the courses. The average scores for the individual proficiency exams were above the mastery level except for proficiency 5. Five of the 10 students failed to gain mastery in this area. This proficiency area covered participles, the most difficult material for students. Yet, even in this area the average of 84.3 was very close to the mastery level.

It should also be noted that the proficiency exam averages dropped as the courses progressed. This is documented by the strong negative correlation coefficient, -0.82, that existed between these averages and the number of the proficiency. However, the standard deviation from the average of 90.30 was fairly low, 3.72, indicating that there was no extreme fluctuation from one proficiency to another. One must keep in mind that the early proficiencies are generally easier than the later ones.

Assessing Self-Paced Timing

Though no deadlines were established, the courses were offered within the normal semester time frame of 15-16 weeks. Students were given a proposed schedule that would result in their completing the courses within the normal semester time frame. However, they were also told that they would be given automatic extensions if they did not complete the course by the proposed dates. The only additional constraint was that they would not be able to register for the next course in the sequence until they completed the prerequisite course. Students taking Greek Grammar I in the fall would not be able to enroll in Greek Grammar II in the spring if they had not completed Greek Grammar I and students taking Greek Grammar II. So, those taking Greek Grammar I were constrained to complete the course within 138 days (Aug 25, 2013 – Jan 13, 2014) and those taking Greek Grammar II were constrained to complete the course with 222 days (Jan 13, 2014 – Aug 25, 2014).

In the first course, five of ten students took extra time to complete the course. On average they took an extra 29.2 days. However, this average was skewed by the fact that one student took an extra 55 days. If this student is excluded, the average drops to 22.75 days or approximately three extra weeks. The grade average for those who completed the course on time was 91.09. However, this average was skewed by one student who scored only 81.67. If this student is excluded, the average rises to 93.45. This is almost identical to the average for those who took extra time, 94.38. So, there was no significant difference between those who completed the course on schedule and those who took extra time. This is confirmed by the weak correlation coefficient of .17 that existed between final average and extra days taken (excluding the one student). What is interesting is that student 10 who did not attain overall mastery completed both courses early, possibly indicating that a rush to complete the courses adversely affected learning.

In the second course, seven of ten students took extra time. On average they took an extra 68 days. However, one should notice that three of the seven took less than 20 extra days and three others took more than 100 days. The average of 20 extra days is consistent with the average amount of extra days taken by students to complete the first course. Why more time was taken by some needs to be explained. It may be related to the lack of constraint to enroll in the next course in the sequence. Students had all summer before the next course would begin. It could also be that external summer activities drew attention away from language study.

Conclusions

The data suggests that a mastery-based pedagogy can be effective in teaching Greek grammar, especially for those students who require extra time to learn. No attempt was made to pretest the study group and no control group was used, so one cannot statistically conclude that this group did significantly better than those learning Greek using a more traditional pedagogy. However, when compared with historical data from prior years for students taking Greek, it seems clear that this approach is more beneficial for those students who need more time to assimilate the material. The study group had higher rates of course completion, a

higher percentage of students attaining a mastery level average for the course, and a higher class average than any traditional class taught by the same professor in the past.

| Name | Proficiency 1 | Proficiency 2 | Proficiency 3 | Proficiency 4 | Proficiency 5 | Proficiency 6 | Final Average | Final Letter Grade | Ttl Extra Days |
|--------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------------|----------------------|
| Stu 1 | 97.00 | 94.00 | 84.60 | 86.00 | 82.00 | 75.00 | 86.43 | В | 118 |
| Stu 2 | 96.00 | 91.00 | 86.80 | 95.00 | 93.00 | 96.00 | 92.97 | A- | 15 |
| Stu 3 | 99.00 | 94.00 | 94.10 | 93.00 | 85.00 | 90.00 | 92.52 | A- | |
| Stu 4 | 99.00 | 99.00 | 97.50 | 98.00 | 94.00 | 100.00 | 97.92 | А | 31 |
| Stu 5 | 96.00 | 94.00 | 95.60 | 90.00 | 91.00 | 95.00 | 93.60 | А | 73 |
| Stu 6 | 98.00 | 95.00 | 84.20 | 94.00 | 75.00 | 94.00 | 90.03 | B+ | 140 |
| Stu 7 | 96.00 | 94.00 | 94.00 | 91.00 | 72.00 | 82.00 | 88.17 | В | 109 |
| Stu 8 | 94.00 | 98.00 | 89.80 | 87.00 | 82.00 | 88.00 | 89.80 | B+ | 136 |
| Stu 9 | 96.00 | 94.00 | 86.50 | 86.00 | 86.00 | 85.00 | 88.92 | B+ | |
| Stu 10 | 87.00 | 83.00 | 75.00 | 89.00 | 83.00 | 80.00 | 82.83 | B- | |
| Ave | 95.80 | 93.60 | 88.81 | 90.90 | 84.30 | 88.50 | 90.32 | | 662 |

 Table 1. Combined Data for All Proficiencies

Table 2. Data for BIB 515 - Grammar I

| | Proficiency 1 | | Proficien | roficiency 2 | | Proficiency 3 | | Course Summary | | | |
|--------|---------------|---------------------|-----------|---------------------|-------|---------------------|--------------|-----------------------|------------------------|-------------------|---------------------|
| Name | Grade | Days to Complete | Grade | Days to Complete | Grade | Days to Complete | Ave Grade | Took Extra Time | Extra Days Taken | Ave On time | Ave Over time |
| Stu 1 | 97.00 | 61 | 94.00 | 110 | 84.60 | 140 | 91.87 | 1 | 29 | | 91.87 |
| Stu 2 | 96.00 | 45 | 91.00 | 79 | 86.80 | 111 | 91.27 | | | 91.27 | |
| Stu 3 | 99.00 | 39 | 94.00 | 69 | 94.10 | 105 | 95.70 | | | 95.70 | |
| Stu 4 | 99.00 | 62 | 99.00 | 88 | 97.50 | 129 | 98.50 | 1 | 18 | | 98.50 |
| Stu 5 | 96.00 | 115 | 94.00 | 145 | 95.60 | 166 | 95.20 | 1 | 55 | | 95.20 |
| Stu 6 | 98.00 | 42 | 95.00 | 83 | 84.20 | 128 | 92.40 | 1 | 17 | | 92.40 |
| Stu 7 | 96.00 | 57 | 94.00 | 102 | 94.00 | 109 | 94.67 | | | 94.67 | |
| Stu 8 | 94.00 | 65 | 98.00 | 125 | 89.80 | 138 | 93.93 | 1 | 27 | | 93.93 |
| Stu 9 | 96.00 | 83 | 94.00 | 104 | 86.50 | 111 | 92.17 | | | 92.17 | |
| Stu 10 | 87.00 | 44 | 83.00 | 78 | 75.00 | 101 | 81.67 | | | 81.67 | |
| Ave | 95.80 | 61 | 93.60 | 98 | 88.81 | 123 | 92.74 | 5 | 29.20 | 91.09 | 94 |

| Comment Stand Date | 1/12/2014 | Course Average | 87.90 | |
|--------------------|-----------|---------------------------|-------|--|
| Course Start Date | 1/13/2014 | Average Grade On Timers | 86.33 | |
| Course End Date | 5/11/2014 | Average Grade Over Timers | 88.57 | |
| Course Days | 118 | Total Taking Extra Time | 7 | |
| Total Students | 10 | Percent Taking Extra Time | 70% | |
| | | Average Extra Days Taken | 68.0 | |

Table 3. Data for BIB 516 - Grammar II

| | Proficie | ency 4 | Proficiency 5 Proficiency 6 | | ncy 6 | Course Summary | | | | | |
|--------|----------|---------------------|-----------------------------|---------------------|--------|---------------------|--------------|-----------------------|-----------------------|-------------------|---------------------|
| Name | Grade | Days to Complete | Grade | Days to Complete | Grade | Days to Complete | Grade Ave | Took Extra Time | Took Extra Time | Ave On time | Ave Over time |
| Stu 1 | 86.00 | 147 | 82.00 | 152 | 75.00 | 207 | 81.00 | 1 | 89 | | 81.0 |
| Stu 2 | 95.00 | 74 | 93.00 | 112 | 96.00 | 133 | 94.67 | 1 | 15 | | 94.7 |
| Stu 3 | 93.00 | 48 | 85.00 | 91 | 90.00 | 117 | 89.33 | | | 89.3 | |
| Stu 4 | 98.00 | 58 | 94.00 | 82 | 100.00 | 131 | 97.33 | 1 | 13 | | 97.3 |
| Stu 5 | 90.00 | 64 | 91.00 | 131 | 95.00 | 136 | 92.00 | 1 | 18 | | 92.0 |
| Stu 6 | 94.00 | 100 | 75.00 | 213 | 94.00 | 241 | 87.67 | 1 | 123 | | 87.7 |
| Stu 7 | 91.00 | 216 | 72.00 | 227 | 82.00 | 227 | 81.67 | 1 | 109 | | 81.7 |
| Stu 8 | 87.00 | 208 | 82.00 | 222 | 88.00 | 227 | 85.67 | 1 | 109 | | 85.7 |
| Stu 9 | 86.00 | 77 | 86.00 | 115 | 85.00 | 117 | 85.67 | | | 85.7 | |
| Stu 10 | 89.00 | 47 | 83.00 | 82 | 80.00 | 114 | 84.00 | | | 84.0 | |
| Ave | 90.90 | 103.9 | 84.30 | 142.7 | 88.5 | 165 | 87.90 | 7 | 68 | 86.3 | 88.6 |

| Course Start Date | 9/25/2012 | Course Average | 92.74 |
|-------------------|------------|---------------------------|-------|
| Course Start Date | 8/23/2013 | Average Grade On Timers | 91.09 |
| Course End Date | 12/14/2013 | Average Grade Over Timers | 94.38 |
| Course Days | 111 | Total Taking Extra Time | 5 |
| Total Students | 10 | Percent Taking Extra Time | 50% |
| | | Average Extra Days Taken | 29.2 |

Questions and Suggestions

The data collected, though encouraging, does not answer all of the questions related to the initial problem. Also, during the study, the facilitator became aware of some limitations, which in turn led to several suggestions for modifying the program. Such questions and suggestions are summarized below.

Questions

- Will students who used the mastery approach have better long-term retention?
- What effect does taking traditional and mastery-based courses at the same time have on each other?
- How does the self-paced approach affect students who procrastinate or who are pressured by other things making demands on their time?
- At what point does too much time hamper learning?
- Can this approach, which was implemented as a fully online course, be implemented in an in-class setting?
- How does the time spent in facilitating such a course compare to the time spent by a professor in a traditional course?
- Can this approach be implemented as easily and successfully in teaching other biblical languages such as Hebrew and Aramaic?
- Could this approach be implemented with no time constraints? That is, would this work better if students could start anytime they chose and finish anytime they chose?
- Could and should this current implementation be segmented into 6 one credit courses with some automated process for enrolling and paying for each proficiency one at a time?

Suggestions

- Develop a mechanism for students to create their own schedule, which can then be tracked by the course management system and so provide more timely alerts and messages about student progress.
- Create a new option for students to enroll in 6 one credit courses on demand, allowing them to start at any time.
- Provide a means for student-to-student interaction to supplement the student-to-facilitator interaction.
- Study more closely Proficiency 5 processes and adjust to improve the learning of participles.
- Develop additional printed and hard-copy learning aids.

Sample Syllabii

Course Syllabus - Greek Language Study

Course Description – BIB 515 Introduction to Greek Language Study is a course of study in the fundamental morphology and syntax of *Koine* Greek, the language of the New Testament. This course emphasizes vocabulary, the form and function of basic Greek nouns and the form and function of basic Greek verbs. 3 credits.

Course Prerequisite(s) – None

Student Learning Outcomes – As a result of this course the student will be able to do the following:

- 1. Explain the Koine Greek noun system.
- 2. Parse most Koine Greek nouns.
- 3. Explain the *Koine* Greek verb system.
- 4. Parse Indicative mood verbs.

- 5. Recall from memory the spelling and definition of 196 Greek words.
- 6. Translate simple sentences from *Koine* Greek into English.

Course Requirements

1. Textbook

Kime, Harold. A Beginning & Intermediate Greek Grammar of New Testament Greek. Lancaster, Pa.: Harold A Kime, 2012 (2nd Printing 2013).

2. Materials

Logos Bible Software Gold Library or higher required

Byki Language Learning Software (Express or Deluxe)

3. Assignments

Reading

Readings are from *A Beginning & Intermediate Greek Grammar*. The reading assignments must be completed prior to the day a unit is covered in class. See Class Schedule for dates.

Translation

The student must demonstrate mastery in translation by translating a story/periscope for each unit. The student will submit online the translation. If the translation does not demonstrate mastery, that translation must be revised until mastery is attained. Students may not take a proficiency examination until they demonstrate mastery in all associated unit translations.

4. Exams and Quizzes

Quizzes

The student must demonstrate mastery of unit materials via a unit quiz. These quizzes will consist of translation, parsing, vocabulary and grammar questions. Quizzes will be taken online. Students may retake quizzes until mastery is attained. Students may not take a proficiency examination until they demonstrate mastery in all associated unit quizzes. A score of 85 is required to demonstrate mastery.

Proficiency Examinations

The student will take three examinations. These examinations will consist of translation, parsing, vocabulary and grammatical questions. Examinations will be taken online and must be completed before the last day scheduled for final examinations.

Course Procedures & Policies

1. Gaining Mastery for a Unit of Study

The course is divided into 15 units. Generally, you should move through the units sequentially, moving to a new unit only after demonstrating mastery of the prior unit. For each unit you should perform the following:

- Read about the unit in the textbook, A Beginning & Intermediate Grammar of New Testament Greek.
- Watch the vocabulary and grammar lesson videos.
- Watch the Reading the Greek NT video.
- Use the Byki drills to learn the unit materials.
- Complete the unit translation assignment and submit it. It will be evaluated by your instructor. The evaluation will be posted in the grades module. You may be required to make corrections to your translation and resubmit it. This process will continue until you have achieved mastery for that translation.

• Take the unit quiz until you score 85% or better. You must retake the quiz if your score is below 85% and continue to retake the quiz until you achieve a score of 85% or better.

2. Demonstrating Mastery for a Proficiency

The course is organized into three proficiencies; each covers five units. When you gain mastery of all of the units in the proficiency, you must complete the proficiency by taking a proficiency examination. These examinations require a password that you will obtain from your professor. When you have mastered all of the unit activities, you must request the password from your instructor. Once you receive the password, you may take the examination. When you are finished you will need to again notify your instructor. The instructor will grade your examination. You will be given only one attempt at taking the examination.

3. Grading Policy

Calculation of Final Grade

| Proficiency | Examination | #1 | (33.3%) |
|-------------------------|----------------|----|---------|
| Proficiency | Examination | #2 | (33.3%) |
| Proficiency Examination | ion #3 (33.3%) | | |

Grade Equivalencies

| A+ | (98-100) | B+ (87-90) | C+ (77-79) | D+ | (67-69) | F | (59-0) |
|----|----------|------------|------------|----|---------|---|--------|
| А | (94-97) | B (83-86) | C (73-76) | D | (63-66) | | |
| A- | (91-93) | B- (80-82) | C- (70-72) | D- | (60-62) | | |

4. Getting Help

Your instructor is available to help you when you are having trouble. You can contact the instructor using Moodle Quickmail. Your instructor may wish to talk to you by phone or via the Moodle Agora Live! chat room system. You may also contact other learners using Moodle Quickmail or the Moodle Agora online discussion.

5. Course Participation Policy

Weekly activity is expected. This includes viewing lessons, taking quizzes, submitting translations, and using the Byki Language Learning software. Students who are not actively participating may be dropped from the class.

6. Late Assignment Policy

This course is self-paced and therefore has no assignment due dates. You can work at your own pace to complete the course. However, all work must be completed by the scheduled end of course. A suggested schedule is found at the end of this syllabus. Students who fail to complete the course by the scheduled end of the class will be granted an automatic extension for up to 6 months. However, students will not be permitted to register for the next course in this sequence until they complete this course.

| Week of | Material Covered |
|---------|---|
| 8/25 | Unit 1 – The Alphabet |
| 9/1 | Unit 2 – Present Active Indicative |
| 9/8 | Unit 3 – Nouns of the 1 st Declension |
| 9/15 | Unit 4 – Nouns of the 2 nd Declension |
| 9/22 | Unit 5 – The Article |
| 9/29 | Unit 6 – 1 st & 2 nd Declensions Adjectives |
| 10/6 | Unit 7 – Prepositions |
| 10/13 | Unit 8 – Present Middle/Passive Indicative |
| 10/20 | Unit 9 – Personal Pronouns |
| 10/27 | Unit 10 – Other functions of αὐτος |
| 11/3 | Unit 11 – Contract Verbs |
| 11/10 | Unit 12 – Demonstrative Pronouns |
| 11/17 | Unit 13 – Relative Pronouns |
| 11/24 | Unit 14 – Imperfect Indicative |
| 12/1 | Unit 15 – Future Active/Middle Indicative |
| 12/14 | Closing Date of Course |

Course Calendar – Suggested Schedule

Course Resources

- Course Website To access the online material for your course, go to <u>www.lbc.edu</u> and click on the <u>Student Portal</u> link. In the "Student Systems" box, click on Moodle. Login using your LBC username and password. You will be connected to your "Overview of my courses" homepage. Click on the course link to access your course.
- 2. Library Resources

To access library resources, go to <u>http://library.lbc.edu/offcampus.html</u>. There are a multitude of resources you can access using your LBC username and password.

Course Syllabus - Greek Language Study

Course Description – This course continues the study of the grammar, syntax and vocabulary for New Testament Greek (Koine Greek) begun in BIB 515. The emphasis of this course is placed on the mastery of additional vocabulary, all verb forms of the indicative mood and additional non-indicative verb forms. In addition emphasis is placed on the translation of more complex sentences and idioms.

Course Prerequisite(s) – BIB 515

Course Objectives – As a result of this course the student will do the following:

- 1. Parse and translate all indicative forms of both ω and μ t verbs
- 2. Parse and translate all subjunctive and imperative forms of verbs.
- 3. Parse and translate infinitives and infinitive clauses

- 4. Parse and translate participles and participial phrases and clauses
- 5. Recall from memory the spelling and definition of the 370 most common Greek words in the New Testament.
- 6. Translate more complex Greek sentences.

Course Textbooks and Materials

1. Textbook

Kime, Harold. *A Beginning & Intermediate Greek Grammar of New Testament Greek*. Lancaster, Pa.: Harold A Kime, 2012 (2nd Printing 2013).

2. Materials

Logos Bible Software Gold Library or higher required

Byki Language Learning Software (Express or Deluxe)

Course Requirements and Activities

Reading

Readings are from *A Beginning & Intermediate Greek Grammar*. The reading assignments should be completed prior to watching lesson videos.

Online Lesson Videos

Unit lessons are available on the class web site. They allow the student to listen and view the content repeatedly. It is highly recommended that you view these lessons. It is best to view the lessons after reading the unit materials in the grammar.

Online Drill and Practice

Use the Flash Card and Drill & Practice activities found on the class website to help in learning vocabulary, memorizing grammatical forms, and translating into English. No grade is given for these activities but they are highly recommended. The key to language acquisition is practice and time on task. The best strategy is to practice with drills in 10-15 minute blocks of time several time a day.

Quizzes

Online quizzes are designed to assess your mastery of a unit of study. You may take a quiz an unlimited number of times. Different questions are included on each attempt. Quiz grades are not included in the calculation of your final grade. However, you must receive a grade of 85 or better on all unit quizzes before you qualify to take the associated proficiency examination.

Translations

Each unit includes a translation to assess your mastery of a unit of study. You may submit a translation an unlimited number of times. Translation grades are not included in the calculation of your final grade. However, you must receive a grade of 85 or better on all unit translations before you qualify to take the associated proficiency examination.

Proficiency Examinations

This course includes 3 online Proficiency Examinations. Each examination emphasizes material from 4-6 units of study. The first examination emphasizes material from Units 16-21,the second emphasizes material from Units 22-26, and the third material from Units 27-30. Later proficiency exams also include material from earlier units. You may take a proficiency examination only once. Proficiency examinations may be take any time after you qualify to take the examination.

Course Procedures & Policies

1. Gaining Mastery for a Unit of Study

The course is divided into 15 units. Generally, you should move through the units sequentially, moving to a new unit only after demonstrating mastery of the prior unit. For each unit you should perform the following:

- Read about the unit in the textbook, A Beginning & Intermediate Grammar of New Testament Greek.
- Watch the vocabulary and grammar lesson videos.
- Watch the Reading the Greek NT video.
- Use the Byki drills to learn the unit materials.
- Complete the unit translation assignment and submit it. It will be evaluated by your instructor. The evaluation will be posted in the grades module. You may be required to make corrections to your translation and resubmit it. This process will continue until you have achieved mastery for that translation.
- Take the unit quiz until you score 85% or better. You must retake the quiz if your score is below 85% and continue to retake the quiz until you achieve a score of 85% or better.

2. Demonstrating Mastery for a Proficiency

The course is organized into three proficiencies; each covers five units. When you gain mastery of all of the units in the proficiency, you must complete the proficiency by taking a proficiency examination. These examinations require a password that you will obtain from your professor. When you have mastered all of the unit activities, you must request the password from your instructor. Once you receive the password, you may take the examination. When you are finished you will need to again notify your instructor. The instructor will grade your examination. You will be given only one attempt at taking the examination.

3. Grading Policy

Calculation of Final Grade

| Proficiency Proficiency Proficiency Examination #3 | | Examination Examination (33.3%) | #1 #2 | | | | (33.3%) (33.3%) |
|--|--------------------------------|---------------------------------------|---------------------------------------|---------------|-------------------------------|---|--------------------|
| Grade Equivale | ncies | | | | | | |
| A+ A A- | (98-100) (94-97) (91-93) | B+ (87-90) B (83-86) B- (80-82) | C+ (77-79) C (73-76) C- (70-72) | D+ D D- | (67-69) (63-66) (60-62) | F | (59-0) |

4. *Getting Help*

Your instructor is available to help you when you are having trouble. You can contact the instructor using Moodle Quickmail. Your instructor may wish to talk to you by phone or via the Moodle Agora Live! chat room system. You may also contact other learners using Moodle Quickmail or the Moodle Agora online discussion.

5. Course Participation Policy

Weekly activity is expected. This includes viewing lessons, taking quizzes, submitting translations, and using the Byki Language Learning software. Students who are not actively participating may be dropped from the class.

6. Late Assignment Policy

This course is self-paced and therefore has no assignment due dates. You can work at your own pace to complete the course. However, all work must be completed by the scheduled end of course. A suggested schedule is found at the end of this syllabus. Students who fail to complete the course by the scheduled end of the class will be granted an automatic extension for up to 6 months. However, students will not be permitted to register for the next course in this sequence until they complete this course.

| Jan 13 | Unit 16 1st Aorist Active & Middle Indicative |
|--------|---|
| Jan 20 | Unit 17 2nd Aorist Active & Middle Indicative |
| Jan 27 | Unit 18 Future and Aorist Passive Indicative |
| Feb 3 | Unit 19 Perfect Active & Middle/Passive Indicative |
| Feb 10 | Unit 20 Nouns of the 3rd Declension |
| Feb 17 | Unit 21 Other Pronouns |
| Feb 24 | Unit 22 3rd Declension & Irregular Adjectives |
| Mar 3 | Unit 23 Present Participles |
| Mar 10 | Unit 24 Aorist Participles |
| Mar 17 | Unit 25 Perfect Participles |
| Mar 24 | Unit 26 Syntax & Translation of Participles |
| Mar 31 | Unit 27 The Infinitive |
| Apr 7 | Unit 28 The Subjunctive Mood |
| Apr 14 | Unit 29 The Imperative Mood |
| Apr 21 | Unit 30 Mt Verbs Indicative Forms |
| May 11 | Deadline for Completion of All Proficiency Examinations |

Course Calendar – Suggested Schedule

Course Resources

- Course Website To access the online material for your course, go to <u>http://onlineed.lbc.edu</u>. Login using your LBC username and password. You will be connected to your "Overview of my courses" homepage. Click on the course link to access your course.
- 4. Byki Language Learning Software available at www.Byki.com

Bibliography

- Block, J., H (Ed.). Airasian, Peter W., Benjamin S. Bloom, John B. Carrol, (1971). *Mastery learning: Theory and practice*. NY: Holt, Rhinehart and Winston.
- Bloom, B. S. (1968). "Learning for Mastery." UCLA-CSEIP Evaluation Comment, 1(2), 273-281.