MASTERY LEARNING

History –

Benjamin S. Bloom considered how teachers might adapt the most powerful aspects of tutoring and individualized instruction to improve student learning. In 1971, he outlined a strategy that incorporated feedback and corrective procedures and named it *Mastery Learning*.

Structure –

With *Mastery Learning*, teachers organize concepts and skills into learning units. Each unit is covered in varying amounts of time; however, units are much shorter than the traditional chapter unit of study and contain only the most fundamental knowledge needed. Following high quality instruction, teachers administer a *formative* assessment that identifies precisely what students have learned well and where they still need additional support. Using the results of the assessment, the teacher gives targeted interventions to each individual student. Those students who have shown mastery during the initial assessment are given the opportunity to deepen their understanding by completing enrichment activities that allow the students to apply the knowledge they learned.

Upon completion of the corrective activities, students take a second, parallel formative assessment that addresses the same learning goals of the unit. The second assessment helps students, parents, and teachers to identify the corrective activities that were effective for future learning. It also serves as a powerful motivational tool by offering students a second chance to succeed.

Evidence Base –

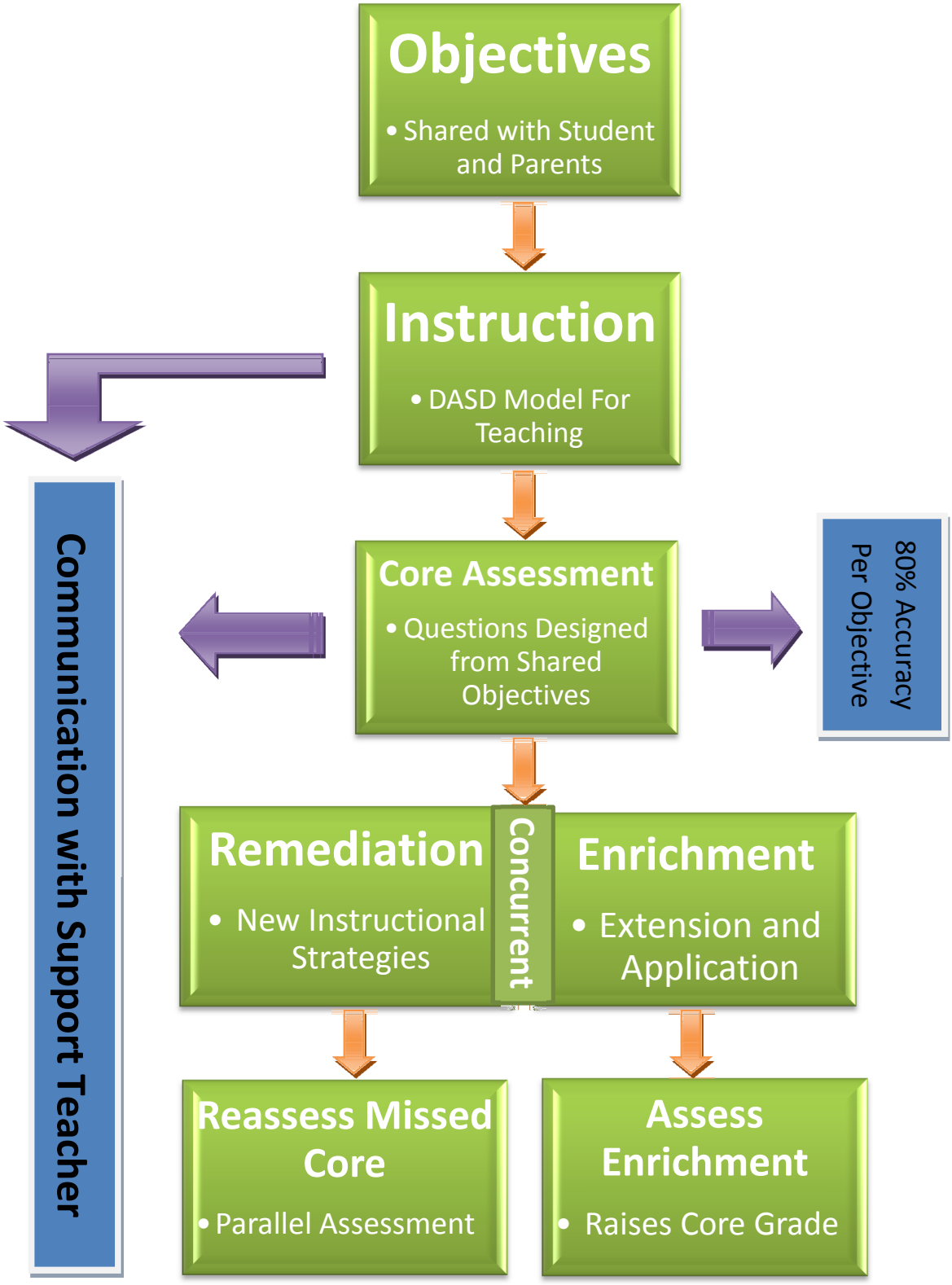
When compared with students in traditionally taught classes, students in well-implemented *Mastery Learning* classes consistently reach higher levels of achievement and develop greater confidence in their ability to learn and in themselves as learners (Anderson, 1994; Guskey & Pigott, 1988; Kulik, Kulik, & Bangert-Drowns, 1990).

Anderson, S. A. (1994). *Synthesis of research on mastery learning*. (ERIC Document Reproduction Service No. ED 382 567).

Guskey, T. R., & Pigott, T. D. (1988). Research on group-based mastery learning programs: A meta-analysis. *Journal of Educational Research*, *81*, 197–216.

Kulik, C. C., Kulik, J. A., & Bangert-Drowns, R. L. (1990). Effectiveness of mastery learning programs: A meta-analysis. *Review of Educational Research*, *60*, 265–299.

MASTERY LEARNING FLOW CHART



THE MASTERY LEARNING APPROACH FAQ 2011-2012

All Algebra I A, Algebra I B, and Geometry level 2/3 classes are structured using the *Mastery Learning* approach. Below are some questions you might have about this program along with information that will help you to understand the program that your students are enrolled in.

1) What do you mean by '*Mastery Learning*'?

The *Mastery Learning* approach encourages students to learn all of the course objectives with at least an 80% proficiency. With the increase in state-mandated testing and college entrance requirements, students need to work to their fullest potential in math. This program is designed to keep students focused on a unit with the goal of mastering each objective.

2) What do students have to do to get a good grade in this course?

This course has two main components. The unit tests, broken into objectives, make up 70% of a student's final grade. The remaining 30% of the grade consists of enrichment, classwork, and homework.

3) How are the unit tests scored?

Each unit is divided into objectives. Students will have two opportunities to demonstrate mastery of these objectives. Mastery is 80% or higher per objective. When 80% mastery of an objective is earned it will translate to 100% for each mastered objective within a test in the grade book. All objectives that are not mastered will be retaken on the second test for the same grading opportunity. For students enrolled in a level two *Mastery Learning* course for the 2011-2012 school year, a third opportunity will be provided to earn credit for the level of mastery achieved on all objectives not mastered at 80% on the first two attempts.

4) What is remediation?

After the first test, mandatory review materials will be provided for the objectives that have not been mastered, as well as time for practice, questions, and individual help.

5) What will a student do during remediation if everything was mastered on the first test?

All students enrolled in *Mastery Learning* will be provided enrichment activities, included as a portion of their grade. This work will allow students to bring all the objectives together, integrating concepts, to solve related problems.

6) What does enrichment mean for a student?

Enrichment is a portion of each unit for all students which provides the opportunity to integrate objectives where choices are provided. Each enrichment choice provides the students an opportunity to expand on mastery objectives and related topics for that course in an independent setting. Some examples include expanded problems, applied activities, projects, and extended assessments.

7) Are students required to complete the remediation and enrichment?

If students need remediation on any objective, they are required to complete the remediation materials during the class periods dedicated to remediation until all work has been successfully completed. Completing all of the remediation materials will afford the students the opportunity to gain a greater

understanding of the necessary objectives prior to the second test. Enrichment is expected to be completed and done to the student's best ability.

8) How does Study Island benefit a student?

Study Island is an online assessment tool students utilize with their *Mastery Learning* courses which spirals or builds upon mastery objectives and reinforces concepts. By utilizing Study Island, students develop awareness and strengthen proficiency in areas aligned with Common Core and other standardized tests.

9) Are there any resources online that can help a student with his/her work?

There are a number of websites dedicated to helping students with their math. In order to access the high school mathematics department webpage, visit www.dallastown.net, select the "High School", "Departments", and "Mathematics". Under "Helpful Links", videos are available to assist students with course objectives. Each course's Moodle also has a link to textbook resources and other helpful resources.

10) Where can students go for extra help?

Mastery Learning students have three periods of Extensions per cycle, during which they are required to work on their skills with a math teacher. In addition, all students may utilize the Math Lab, located in the back of the library, during study halls with a pass from their teacher or the Math Lab supervisor. There is a math teacher in the Math Lab every period of the day. As always, students can make an appointment to meet with their math teachers before or after school for extra help, as schedules allow.