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Mastery learning: The principal's role

Abstract

According to Bloom (1968), mastery learning is a flexible, adaptive approach to instruction in which individual learning styles and abilities are considered in the design of the instructional units. Mastery learning capitalizes on the notion that almost all children can learn under prescribed conditions. Mastery learning approaches assume that virtually all students can master a great deal of what they are taught in school if the "instruction is approached systematically, if students are helped when and where they have learning difficulties, if they are given sufficient time to achieve mastery, and if there is some clear criterion of what constitutes mastery" (Block, 1977, p. 6).

MASTERY LEARNING: THE PRINCIPAL'S ROLE

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David Scot Hoffman

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According to Bloom (1968), mastery learning is a flexible, adaptive approach to instruction in which individual learning styles and abilities are considered in the design of the instructional units. Mastery learning capitalizes on the notion that almost all children can learn under prescribed conditions.

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Unlike other approaches, mastery learning is designed for use in the typical classroom situation. The strategies can be group based and teacher paced. Mastery learning is based primarily on human beings, rather than on technological devices for success, except for correctiveness, enrichment and record keeping.

Mastery learning is designed to make all children succeed (Cohen, 1981). No other legitimate approach to formal instruction holds that belief. Furthermore, no other approach provides the means for achieving it. In mastery learning

children cannot fail, and it is failure that is constricting and destructive to children.

Although there is no one clear definition, mastery learning is broadly defined by Horton (1981) as the attainment of adequate levels of performance on tests that measure specific learning tasks. Mastery learning also describes an instructional model whose underlying assumption is that nearly every student can learn everything in the school curriculum at a specified level of competence if the learner's previous knowledge and attitudes about the subject are accounted for, if the instruction is of good quality, and if adequate time on the task is allowed to permit mastery.

The mastery learning model requires concise, testable objectives that clearly describe the criterion for mastery and an accurate pre-assessment of the learner's knowledge of the task to be undertaken. Methods of instruction usually consist of some large group, some small group, and some one-to-one teaching, including peer tutoring. Various combinations of computer-assisted instruction, programmed instruction, games, worksheets, and other activities are components of every mastery learning model. This assessment is followed by prescription of further learning, which provides for progression to new learning tasks or remediation. Enrichment materials are prescribed for students who finish the tasks

ahead of the others. A post-assessment that measures individual outcome, previously identified in the objectives, is the final stage of the mastery learning process.

If instruction and time are adapted to each student's needs, the achievement distribution will no longer be distributed normally, but highly skewed (Bloom, 1978). Most of the scores would pile up at the high achievement end of the measure.

The students are expected to need different amounts of time and help, with the slower students initially needing as much as five times the amount of time required by the faster learners. When the slower students do succeed in attaining the same criterion of achievement as the faster learners, they appear to be able to learn equally complex and abstract ideas. They are able to apply these new ideas to new problems, and retain the ideas equally well, in spite of the fact that they learned with more time and help than was given to others. Their attitudes and interests toward the subject in which they attain mastery are as positive as those of the faster learners.

Cooperation among the students is a side effect of mastery learning. Students may all earn equally high grades if their achievement warrants it. Under the usual normal curve grading

conditions, if one student helps another in the learning process he or she may be doing so at their own expense.

The typical result of the mastery learning studies in the schools is that about 80% of students in a mastery class reach the same final criterion of achievement as approximately the top 20% of the class under conventional group instruction.

One of the societal features of mastery learning is the degree to which it pushes for a society based on excellence of all participating rather than one based on the excellence of a few. "Can any society afford universal excellence, or must all societies make most people incompetent so that a few can be competent?" (Block, 1979, p. 115).

The Principal's Role

The development and implementation of a mastery learning program demands so much time, cooperation, and commitment on the part of so many that a change to it must be based on need (Klawunder, 1982). Change for the sake of change will not get the dedication from the staff required to make the mastery learning program a success.

Chandler (1982) states that mastery learning must come out of a reaction of dissatisfaction with current methods of instruction. It is a tool that is effective under certain conditions with a specific clientele for specific purposes.

Klawunder (1982) describes the mastery learning program as a slow and methodical process. Old beliefs about schools and students held by many educators and community members must be replaced by new beliefs based upon research proving mastery learning to be a workable system. Implementation of the program is a process that lasts for a number of years and should not be thought of as a packaged product that can be purchased and put into operation at the beginning of the school year.

Due to the time and money commitment necessary to effect a change to mastery learning, educating the school board and community and developing their dedication to mastery learning must be the first step that a principal takes. If mastery learning can be viewed as a solution to some of the deficiencies and problems of the district, and the board and community become committed to the program, change to the mastery program is likely to occur.

Initial involvement in and dedication to the mastery learning program by the head administrator is essential to effect change. Starting a program demands many significant school management changes and modifications of school procedures. In order for these changes to be made the superintendent must be more than a spectator. The

superintendent's leadership style must lend itself to the changes being made towards the mastery learning program.

According to Koehn (1983), the principal who guides the mastery learning program must consider three responsibilities: (a) staff development, (b) instructional leadership, and (c) climate management.

Staff Development

Principals first step is to ensure that all concerned understand and agree upon what is meant by mastery learning and what its implications are towards instruction in their particular school (Klein, 1979). Teachers should initially apply mastery learning strategies to only one class. Asking teachers to introduce these procedures in more than one course can possibly exhaust their energy at the outset, and thus diminish the effectiveness of their instruction (Fitzpatrick, 1985).

Mastery learning involves an incredible initial investment of time and pre-planning by all involved (Knight, 1981). Time is one commodity teachers cannot afford. Recognizing the fact, time must be allotted to produce countless extra worksheets, games, activities, and manipulatives to reinforce the concepts being taught. This could be achieved by providing extended contract time or the assistance of an additional staff person. Once the initial investment is made, the

materials can be used over and over again with minor modifications.

The principal stresses to the teacher that mastery learning combines many of the instructional practices that he or she already employs. Mastery learning doesn't require starting over. If a teacher can understand this general philosophy, he or she will be far ahead (Pruitt & Jackson, 1984).

Since pre-service education for most teachers has not prepared them for mastery learning, the principal needs to provide materials, to study, read, and learn. Workshops will need to be set up and run by professionals qualified in the mastery learning concept. Visiting schools where mastery learning is already in operation is another good idea (Horton, 1981).

Every lesson taught is based on behaviorally defined objectives (Cohen, 1981). Each lesson or set of lessons ends in a criterion-referenced measure. All students must demonstrate mastery of the intended objectives before moving to the next point in the curriculum. Students who do not reach this mastery level must be given additional instruction until they do. The extra help given is an integral part of the curriculum and not just remediation. It is based on Carroll's (1963) idea that any student can learn almost

anything if they are given the time and effort. Perhaps the greatest contribution of mastery learning is that it makes teachers check the match between instructional process and measured outcomes.

Instructional Leadership

The schools must have building principals who are intent on obtaining district goals and objectives and who are skilled at involving and motivating their teachers to implement the programs in mastery learning designed to accomplish these goals and objectives (Carmichael, 1973). The principal must be able to identify those teachers who will assist and support mastery learning concepts and teaching strategies (Cohen, 1981). He must be able to neutralize any teacher opposition when it arises. If negative attitudes develop in the early stages of the implementation of the mastery learning program without being corrected, opposition will grow until the program is a failure.

The innovative principal must be able to motivate and involve parents, students, and teachers in the whole process of implementing mastery learning. The principal must interest and excite the teachers enough to make them receptive to the change. The basic condition of readiness for the teaching staff is that of being student oriented. Successfully implementing mastery learning requires that the teacher can

diagnose, prescribe, monitor, and evaluate each student's activities. Student activities must be the focal point, not teacher activities.

Climate Management

In a mastery learning system the principal becomes the manager of instruction and must employ a scientific approach to instructional leadership (Koehn, 1983). The principal thus, must continuously monitor individual classroom learning by regularly reviewing student data as well as the traditional classroom observation approach. The referent data must be reviewed regularly to assess growth of individual students. Where expectancies are not being realized, a meeting with individual teachers will have to be held to discuss reasons and explore alternatives. The data must be passed on in the form of progress made to both the parents and the learner.

The management of school climate is one of the most crucial factors in implementing mastery learning. High levels of productivity being measured through satisfaction and achievement must be obtained by students and staff.

Administrative Problems

Administrative problems may be created when a mastery learning program is being implemented (Torshen, 1977). These problems can result from the strengths of the mastery learning model.

The mastery model permits varied and flexible grouping of students. The model also enables students to work towards diverse objectives using a wide range of instructional methods and materials. This diversity in the instructional program creates a need for extensive record keeping. It is essential to keep a record of each student's instructional program.

It is also necessary to record the results of the various assessments of each student's progress. After the student has been in a mastery program for several years, his/her record could contain hundreds of pieces of information about his/her progress. A procedure of record keeping must be used that highlights important information and doesn't require extensive amounts of teacher or student time.

In using records, each student's right of privacy must be protected. Only qualified professionals and other persons directly involved and affected by the records should have access to them. School personnel will also need help in interpreting the information in the records.

The mastery learning model is designed to maximize the number of students who reach the performance levels defined as adequate for competence. The students' success in reaching these levels is to function as a reward to them for their efforts. Students' success is also intended to serve as the faculty's reward for their efforts in planning and preparation,

in encouraging and motivating the students, in searching for methods and materials to meet the needs of the students, and for accessing student's performance. Success of the students also serves as a reward to the principal for his time and effort in preparing and implementing the mastery learning program.

Conclusion

Mastery learning is effective and appropriate in instructional improvement. It has been developed thoroughly and is well documented in literature. While research evidence and the testimony of its proponents indicate that mastery learning can work, it is not a method to be undertaken without a lot of thought and preparation. It requires a committed principal and dedicated teachers who believe in the concept and are willing to work at perfecting classroom instruction. Long range planning is essential. The teachers who had tests written in advance and had planned for correctives and enrichments had little trouble teaching the different mastery learning units. Those who lacked time for advanced planning had difficulty handling both tasks simultaneously.

The future of mastery learning as a means of instruction look promising. Several publishers are producing text suitable to the mastery learning approach. Some include formative

and summative tests and activities for corrective and enrichments.

Mastery learning results in increased individualization but in the same notion increased teacher planning. Concerns are also raised about less content being covered, holding back high ability students, and the difficulty in implementing mastery learning when there is irregular attendance by students. These are all problems that must be looked at in pre-training, follow-up training, and refinement in the following years after the implementation of the program. Principals must play a major role in the process of overcoming these obstacles if mastery learning is to be successful. Working with teachers to overcome the problems that arise during implementation and understanding the initial awkward feelings of the teachers will go a long way in gaining the teacher's trust in mastery learning itself. Encouragement and released time to share instructional ideas with each other through peer observation are other ways the principal can make the teachers more comfortable with the new program. Finally, the principal must truly be an advocate and committed to help students achieve a mastery level performance.

With public demand growing for schools to be accountable for the students they produce, mastery learning offers alternatives to the traditional methods of instruction.

Principals must weigh both sides and see where their school tips the scales at.

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