



Mastery Learning

Background

The summary below presents the research evidence on mastery learning in the Arab World.

The Teaching & Learning Toolkit focuses on impact on outcomes for learners; it presents an estimate of the average impact of mastery learning on learning progress, based on the synthesis of a large number of quantitative studies from around the world.

This page offers a summary and analysis of individual studies on mastery learning in the Arab world. In contrast to the Toolkit it includes studies which do not estimate impact, but instead investigate the implementation of interventions and how they are perceived by school leaders, teachers and students using a range of research methods. This information is valuable for school leaders and teachers interested in finding out more about particular examples of behavior interventions that have been delivered in the Arab world.



Summary of the research in the Arab World

Mastery learning is an approach to teaching that teachers use to ensure that students learn until they reach a level of mastery. Teachers divide the subject matter and learning content into specified objectives which are pursued by students until they are achieved. Students are then expected to work through each block of content in a series of sequential steps. Students must demonstrate a high level of success on tests, typically at about the 80% level, before progressing to new content.

Mastery learning is an effective intervention that could be used to develop students' achievement in many fields. It helps make students' learning well-organized and increases their attention towards the subject learned. This way of teaching provides a suitable environment learning while taking into consideration students' individual differences. This is mainly done through providing additional support (i.e., peer support, small group discussions, or homework) to students who do not reach the required level so that they can reach the expected level.

For example, the readers' workshop was used as a differentiated reading approach used by teachers to ensure students mastery learning and improve their reading levels and comprehension skills. Collecting qualitative data before, during, and after implementing the differentiated approach, through running records, observations, and interviews, Mounla, Bahous and Nabhani (2011) found out that the reading workshops was an efficient instructional approach because it provided differentiated reading environment for students with diverse learning needs. Students were encouraged to take risks while reading and were provided with individualized instruction that directed their success and increased their learning and engagement for them to become proficient readers. The mini lessons delivered in the reading workshop empowered first grade students in Lebanon and equipped them with an advanced reading repertoire that they can use while reading to reach higher reading levels. Teachers during these mini lessons demonstrated effective reading strategies to students with the goal that the students would use the techniques and strategies later on their own.

In the same context, Awada and Faour (2018) showed that teachers who used Glogster and cooperative learning as a differentiated instruction developed students' quality of their English and science project. Glogster is a Web 2.0 tool



used to create a glog which is an interactive platform in which users create an online poster containing text, video, images, and graphics, can be used easily by students of different ages and learning profiles. It was used in this study to mainly support students during their project presentations in English and science such as collecting information about their project and present their findings. In this mixed method study, 18 teachers and their students ($n=374$) in grade eight were randomly assigned to control and experimental group. Using Glogster and cooperative learning as differentiated instructions enabled students to inquire about one aspect of the general topic whereas the teacher presented many themes and sides to the problem. After that, students were instructed to use a variety of resources and material to carry out their inquiry quest. Findings of this study showed that Glogster and cooperative learning increased students' achievement and helped teachers differentiate and scaffold instruction successfully. In particular, Glogster helped students cooperate and changed the ways they learned in the classroom.

Additionally, to improve tenth graders' grammar learning in Palestine, a mastery learning model was used on the experimental group while the control group was taught by the traditional method. Posttest results showed statically significant differences in favor of the experimental group. Teaching grammar points through the mastery learning model gave more opportunities for students to show their achievement on learning grammar, enhanced student's interaction, and ensured that students' different needs are satisfied. This approach impacted student's self-efficacy, attitudes and interest towards the English language (Moumer & Mansor, 2017).

In another mixed method study, Slimane (2018) used questionnaire, document analysis, classroom observation, and follow up interviews to evaluate the competency-based teaching in the Algerian English secondary schools' textbooks and syllabus. The results showed that teachers refrained from implementing mastery learning approach because the syllabus and textbooks are not aligned together nor with this active pedagogy. Additionally, students, teachers, and supervisor participants had different representations of the learning objectives compared to the ones mentioned in the program. This study highlighted the main



obstacles for implementing differentiated instructions as: large class size, heaviness of syllabus, and lack of adequate teacher training programs. Mastery learning approach was also used by teachers as a new teaching strategy to improve students' weaknesses comprehending religious Islamic concepts. Mastery learning increased tenth grade students' learning of religious concepts in Jordan. In this mastery learning model, teachers determined the objectives and the test for their performance level. Then, they developed educational activities and related materials to help students achieve the goals and reach the level of proficiency expected. Teachers selected what students should learn and stimulate and guided their learning through the educational materials. They also showed students how to judge and assess their learning. When assessing students' performance, teachers identified students who did not reach 80% on the test and supported their learning to reach their goals and perform better on the final test. Findings of this study showed that the variety of educational activities that were given to students increased their self-confidence and provided them with various solutions to the problems or difficulties they faced. Providing materials in a sequence manner reflected on the organization of ideas of these students which helped them to master the information and reach the desired outcomes (AlKhateeb, Abu-shreah & Al-khattab, 2015).

Teachers who implement the mastery learning in their instruction should plan their lesson according to students' needs (Moumer & Mansor, 2017). Additionally, they should support students in identifying their mastery goals to increase efficiency and mastery of their learning, understanding, and development of skills (Moumer & Mansor, 2017). Training students on mastery goals has usually encouraged their curiosity and increased their proficiency required for the task without worrying about the grades. Student's internal motivation also tended to increase which in turn has impacts positively on their academic achievement (Atoum & Abu-Hilal, 2017).



Summary paragraph:

Mastery learning, despite being an effective intervention to develop students' achievement by considering their individual differences, is rarely explored in the Arab world. Very few studies investigated the impact of mastery learning on students' achievement. Furthermore, teachers' opinions and understanding about this approach are still vague. In Algeria for instance, teachers refrained from implementing mastery learning approach because their syllabus and textbooks were not aligned together, nor were they aligned with this active learning pedagogy. Additionally, having large class sizes, a heavy syllabus, and lack of adequate teacher training programs hindered the implementation of differentiated instruction in the classroom.

Where studies have examined this approach, they have found evidence of effectiveness in developing students' academic and personal competencies. For instance, in an experimental study conducted in 2017 among tenth grade students in Palestine, students who learned grammar through the mastery learning model showed better results on the posttest when compared with their peers using the traditional method. Not only that, students' interest about the subject matter improved and their self-efficacy levels increased.

Overall, mastery learning research in the Arab world is still scarce. A majority of these studies were mostly conducted among secondary school learners. That is why, researchers are recommended to investigate the most effective strategies through which teachers can apply mastery learning for both primary and secondary level. Further research is also recommended to look at teachers' perceptions and to investigate the best types of training programs that would prepare them for mastery learning implementation in their instruction.



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Search terms

Mastery learning; learning for mastery; mastery instruction, individualized instruction; individualized program; programmed instruction; personalized instruction; personalized system; differentiated instruction; differentiated learning; adaptive learning.

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