Reducing Class Size

Background

The summary below presents the research evidence on reducing class size in the Arab World context.

The Teaching & Learning Toolkit focuses on impact on outcomes for learners; it presents an estimate of the average impact of reducing class size 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 reducing class size 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 reducing class size interventions that have been delivered in the Arab world.

Summary of the research in the Arab World

Research in the Arab world showed evidence that class size is a major aspect influencing parents choice of selecting a school (Alsauidi, 2015) and impacting teachers experiences inside the classroom (Ayoub, 2019; Kerma, 2019). Teachers working in overcrowded classrooms face stress and pressure and therefore fail to deliver quality education and cope with their classrooms (Kerma, 2019). Class size also affects the overall teaching and learning environment inside the class and predicts students' performance. In a 2016 study conducted in Oman, quantitative data collected from 12th grade students showed that class size is negatively correlated with students' performance (Al- Farsi, 2016). This means that whenever class size increase, students' performance decrease because teachers become less able to manage students behavior and differentiate their instruction (Al- Farsi, 2016; Ayoub, 2019; Kerma, 2019).

Empirical evidence showed that there is a strong relationship between class size and teaching methods and practices (Almulla, 2015). Teachers who teach small class size tend to use a variety of methods and open questions, which are more student-centered whereas teachers in large classes tend to use mainly a teacher-centered approach, using lecture style and closed questions (Almulla, 2015). Teachers in small class size are able to listen to each student's questions and give individual student time. They implement the cooperative learning methods and engage students in classroom activities. In addition, the interaction between teacher and students in small class size is much higher than the large class size mainly due to the open type questions teachers often use with their students which encourages open discussion about the topic being learnt. Hence, managing classroom with large number of students decreased the ability of teachers in Lebanon (n=15) and UAE (n=18) to implement the inquiry-based instruction approach in science classrooms (Baroudi & Rodjan-Helder, 2019). Teachers reported that large class size prevented them to engage their students in science hands on activities. Students were rarely provided with the opportunities to make observations, formulate hypotheses, plan investigations, perform experiments, and analyze and interpret their findings. As a consequence, these teachers followed most of the time the traditional teacher centered method in science instruction.

Furthermore, when investigating the effects of class size on teaching Almulla (2015) found out that Saudi Arabian primary school teachers in Years 4, 5 and 6 who teach small classes (n=30) and large classes (n=37) believed that class size has some impact on their teaching. When teaching a large class size (30 to 40 students), teachers usually use a limited range of teaching methods such as teacher presentation or lecture students which makes the class to be more teacher centered. However, in small class size (15 to 20 students), students often learn in pairs or groups which creates an active learning environment for students. Hence, the majority of teacher participants conveyed that they prefer to teach a class which contains 15 to 20 students (Almulla, 2015).

Research revolving around reducing class size has mostly focused on the barriers and difficulties that teachers face when teaching a large class size. Studies like Almulla (2015), Alzahrani (2017) and Khouya (2018) highlighted that teachers usually struggle in managing students' behavior and delivering the learning objectives in the lesson time. More importantly, teachers in small class size are able to give attention and provide support to each student and ensure an individual assessment for students' performance. When investigating the factors affecting the practice of formative assessment in mathematics education, 202 in-service mathematics teachers at both rural and urban public elementary schools in Saudi Arabia indicated that class size or the large number of students in their classes is another factor hindering the practice of formative assessment in their classrooms. Class sizes influence teachers' decision whether to use practical assessment in their lessons (Alzahrani, 2017). Having large class size also cause less individualized interaction between students and their teacher, many behavior problems, unimproved students achievement, and lower score exams (Khouya, 2018). Furthermore, large class size is a challenge for EFL teachers when teaching students 21st century skills such as the critical thinking and inquiry learning skills. When observing a sample of 62 English classes in 12 schools in Oman , Al-Kindi and AL-Mekhlafi (2017) discovered that the size of the classroom is not helping teachers to teach critical thinking skills effectively, nor giving oral and written feedback to the students while teaching critical thinking skills. Findings of this study showed that teaching a large class hinders the process of critical thinking instruction where teachers are supposed to monitor students' learning process by providing them with the needed feedback and follow-up individual students to ensure the

development of their skills. Having 45 students in one class was also considered as an obstacle for elementary school science teachers when teaching science through inquiry because this teaching approach demands lots of time to prepare for and to apply inside the class (Assiri, 2016). Hence, data collected from 51 teachers in Saudi Arabia (28 males and 23 females) revealed that the class size is not allowing them to implement inquiry activities that demand students to make observations, pose questions, make hypothesis, collect data, and solve problems. Class size was also found to have a positive significant relationship with teachers' willingness to teach students with ADHD in their classrooms. Quantitative data collected from 300 elementary school teachers in Saudi Arabia found a significant difference in teachers' attitudes concerning their willingness to teach students with ADHD based on their class size (Abaoud, 2013). Teachers with few students are more willing to teach students with ADHD in their classrooms than are teachers with a large number of students because they will have better manament of studnets with ADHD in the classroom and be more careful of their needs in the classroom.

Through descriptive and inferential statistics, 352 teachers in Saudi Arabia are not able to effectively use Web 2.0 applications in education due to school level barriers, such as the large number of students (Bingimlas, 2017). These applications are modern tools that could create an active and collaborative, generative, interactive learning environment. Teachers who use Web 2.0 applications increase their interaction with students inside and outside of the classroom. Additionally, these tools help students to create groups for sharing knowledge, collaborating, and growing together. If class size were reduced then teachers' use of Web 2.0 applications will become easier because teachers will have more time to design and control the learning activities in line with their lesson.

Despite the benefits of reducing class size on students engagement and interaction, evidence showed that there is no significant difference between small and large classes when it comes to students engagement with some specific classroom activities. This is due to the limited lesson time and the loaded curriculum (Almulla, 2015). Additionally, results of a mixed method study conducted by Aljouei and Alsuhaibani (2018) in Saudi Arabia and another qualitative study conducted by El Karfa (2019) in Morocco discovered that class size does matter in EFL teaching and learning, as English classes are based on communication and

require interaction between students. In fact, teachers teaching classes with more than 30 students are less likely to apply new English teaching approaches, as large classes are always associated with students' disorderliness, distraction, and lack of efficiency. Similarly, when investigating the problem of demotivation in English language learning (ELL) within the Moroccan context, Khouya (2018) revealed that 201 baccalaureate students (second year) from six secondary schools considered crowded classrooms as a main factor for their demotivation to learn English along to the quality of the English textbook and classroom atmosphere. Having large classroom does not allow the teacher to pay attention to all students and, therefore, provides those who need extra help whenever they need it. It also causes a lot of discipline problems that distract the attention of both students and teacher and limit students participation.

To overcome these difficulties, Almulla (2015) recommended teachers to be trained with the tactics for dealing with large classes and for teachers to discuss these difficulties and share their best practices in classroom management and help each other in terms of sharing ideas, activities and strategies. Additionally, Almulla (2015) suggested that having a teacher assistant would reduce the teacher-student ratio and therefore assist in managing the classroom and with the assessment of students' performance as well as providing help when it comes to giving students further support and individual time and attention.

Summary paragraph:

Evidence of reducing class size in the Arab world showed that student numbers inside the classroom can change teachers' experiences and pedagogies and that smaller class sizes were related to higher student performance. Studies in Oman, Morocco, Egypt, Algeria and Saudi Arabia reported that whenever class size increase, teachers ability to deliver student-centered activities decrease. Class size was found to be particularly important when teachers intend to use the Web 2.0 applications, inquiry-based learning in science, and nurturing students critical skills.

Researchers have also highlighted the impact of class size on students interaction, communication, and engagement inside the class. Additionally, having large classroom does not allow the teacher to pay attention to all students, individualize the instruction and assess their performance. It can also cause discipline problems that distract the attention of both students and teacher and limit students participation.

More research about reducing class size is needed in this region specifically to examine its relationship with teachers' and students' performance as well as understanding teachers experiences and feelings and how are these impacting their teaching quality. Further research could also look at the factors that could support teachers' and students in large classrooms.

References

Abaoud, A. A. (2013). Elementary School Teachers' Attitudes toward Willingness to Teach Students with ADHD in Their Classrooms in Riyadh City in Saudi Arabia (Doctoral dissertation). Kent State University.

Al-Farsi, F. (2016). Performance Of Students In Terms Of Their Relationship With Educational Indicators In Schools Of The Sultanate Of Oman (Master Thesis). Universiti Sains Islam Malaysia.

Aljouei, K. F., & Alsuhaibani, Y. A. (2018). Evaluating" Traveller" English Textbook Series from Saudi Secondary School EFL Teachers' Perspectives. English Language Teaching, 11(12), 138-153.

Al-Kindi, N. S., & AL-Mekhlafi, A. M. (2017). The Practice and Challenges of Implementing Critical Thinking Skills in Omani Post-Basic EFL Classrooms. English Language Teaching, 10(12), 116-133.

Almulla, M. A. (2015). An Investigation of Teachers' Perceptions of the Effects of Class Size on Teaching. International Education Studies, 8(12), 33-42.

Alsauidi, F. (2015). An Investigation Into Reasons Influencing Kingdom of Saudi Arabian Parents' Choice of Selecting School Related to Quality of Instruction, Class Size, and Student-Teacher Relationships. US-China Education Review, 5(11), 718-733.

Alzahrani, S. (2017). Saudi Mathematics Teachers' Understanding and Practices of Formative Assessment in Elementary Schools (Doctoral dissertation). Graduate School Southern Illinois University Carbondale.

Assiri, Y. I. (2016). Science teachers' knowledge, beliefs, values, and concerns of teaching through inquiry (Doctoral dissertation). Southern Illinois University at Carbondale.

Ayoub, G. M. (2019). Teachers' experiences in overcrowded classrooms in Egyptian public schools (Masters thesis). The American University in Cairo, Egypt.

Baroudi, S., & Rodjan Helder, M. (2019). Behind the scenes: teachers' perspectives on factors affecting the implementation of inquiry-based science instruction. Research in Science & Technological Education, 1-22.

Bingimlas, K. A. (2017). Learning and Teaching with Web 2.0 Applications in Saudi K-12 Schools. Turkish Online Journal of Educational Technology-TOJET, 16(3), 100-115.

El Karfa, A. (2019). The Communicative Orientation of English Language Teaching Classrooms in Moroccan Secondary Schools. English Language Teaching, 12(11), 97-112.

Kerma, M. (2019). The effect of overcrowded classrooms on teachers' performance. Dirassat Insaniya wa Ijtimaiya Review, Univeristy Oran 2, 10.

Khouya, Y. B. (2018). Students Demotivating Factors in the EFL Classroom: The Case of Morocco. Advances in Language and Literary Studies, 9(2), 150-159.

Search Terms

Class size reduction; small class; students-per-teacher; number of students; teacher student ratio; classroom/group size; class size groups.

Databases searched

Academic search complete

ERIC (EBSCO)

Education Source

Google scholar

ProQuest Central

ProQuest Dissertations

Web of Science