An Investigation of Teachers' Perceptions of the Effects of Class Size on Teaching

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Abstract

This study investigates the perceptions of Saudi Arabian primary school teachers in Years 4, 5 and 6 and discusses the effects of class size on teaching. The data comes from 30 teachers who teach small classes in two private schools, and 37 who teach large classes in two state schools in Alhafouf, Saudi Arabia. The study discusses whether different numbers of students in class could have an impact on teachers' perceptions and teaching practices. The data show that teachers in both small and large classes believe that class size has some impact on their teaching. Teachers in large classes report that they usually use a limited range of teaching methods, which tend to be more teacher-centred. The data show that all teachers in both small and large classes believe that class size has some impact on their teaching. In addition, the majority of participants say that they prefer to teach a class which contains 15 to 20 students. It has been highlighted in this study that there are many barriers and difficulties, especially with regard to lesson time, which most teachers in large classes could face regarding the management of students' behaviour and the assessment of students' performance. Empirical evidence suggests that class size is still the major aspect affecting teaching.

Keywords: class size, effective teaching, teachers' perceptions

1. Initial Considerations and Context

Class size is very likely to be one of the factors that have a considerable impact on education. According to Pitch and Campbell (2010), there has been much debate among policy makers and researchers for over a quarter of a century about the influence of class size on teaching and on learners' attainment. According to Blatchford (2009), a number of countries, such as the UK and the US, have tried to reduce class size. A possible reason for this is that many studies, such as Project STAR (Student-Teacher-Achievement-Ratios) in the USA in 1985, and Project CSPAR (Class-Size-Pupil-Adult-Ratios) in the UK in 2000, have shown that small classes lead to better student performance. Munos and Portes (2002) support Blatchford's view by pointing out that an increase in the number of learners in the classroom may have a negative impact on educators' workload and may reduce the opportunities for individual teaching.

However, Hanushek (1999) states that it is difficult to prove the effects of classroom size, as it depends on other aspects and variables, such as individual differences among learners and teachers, as well as the approaches which are used by educators. In addition, the advantages of class size reductions are not supported by clear evidence (Blatchford & Mortimore, 1994). There is, therefore, a need to address these claims empirically. As my area of interest is within primary schooling in Saudi Arabia, the study focuses on the teachers' perceptions of class size and its possible influence on their teaching.

In Saudi Arabia, the number of students has increased gradually in primary, intermediate, and secondary schools because of the growth in the Saudi population (Ministry of Education [MOH], 2004). For example, statistics indicate that there were 2,493,125 learners in primary schools in 2010, while in 2011 the number had increased to 2,513,815 (MOH, 2012). For this reason, there is a general lack of classrooms in school buildings and therefore there are a large number of learners in the few classrooms available (Al-Abdulkareem, 2004). In 1999, the Ministry of Education indicated that the average number of students per classroom was 22.2 in primary and intermediate schools. However, Al-Abdulkareem's research (2004) has shown that the number of students per classroom is actually between 30 and 45. This growth in the number of learners is considered to be one of the major educational challenges faced by the country's education authorities (MOH, 2004). This study,

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consequently, focused on Years 4, 5 and 6 in Saudi primary schools in in the city of Alhafouf, in order to investigate the effects of class size with regard to teaching methods and approaches. The site of this investigation was selected because of accessibility to participants, since the researcher has previous worked with gatekeepers in the Ministry of Education and with school principals in Alhafouf in his capacity as school supervisor. The schools were also chosen for their typicality since they have similar characteristics and follow the same rules and curriculum as all other schools in the country. Public education in Saudi Arabia is free for students between the ages of 6 and 18 years (MOH, 2012) (Table 1).

Table 1. Saudi Arabia's three main education compulsory stages

Stage	Age-level	Length of stage in years	Qualification
Primary school	6-12	6	Primary education certificate
Intermediate school	12-15	3	Intermediate education certificate
Secondary school	15-18	3	Secondary education certificate

Every school in Saudi Arabia is single-sex. According to the latest statistics from 2011, there are 6,784 male-only schools in the elementary stage, with a total of 66,132 classrooms and 1,273,119 students. Additionally, there are 6,844 female-only schools, with a total of 61,624 classrooms and 1,240,696 students (MOH, 2012). These numbers would give us an average class size of 19.25 for boys-only classes, and 20.13 for the girls-only classes. However, it is not uncommon for some Saudi primary classes to have 35-50 learners, while other classrooms have only 15-25 students. This difference in the number of learners in a class might or might not have an impact on learners' attainment and effective teaching.

2. Class Size and Teaching

According to Wilson (2002, p. 2), the concept of class size (CS) relates to "...the total number of pupils allocated to a teacher for all or some of his/her teaching timetable". In other words, class size is the number of students in a given class with a teacher. In the light of this definition, a number of studies have tried to determine the ideal number of students in small and large classrooms. For instance, in the USA, one of the most notable studies on class size was the STAR Project (Student-Teacher-Achievement-Ratios), carried out in 1985 in Tennessee.

This study aimed to examine the influence of class size on learners' achievement in regular class size (22-25 students) and small class size (13-17 students) (Hattie, 2005). Blatchford and Mortimore (1994) state that an optimal small class size contains 20 or fewer learners. The present study adopts the following classification: a small class has between 15 and 20 students and a large class has between 30 and 40 students. This investigation was not carried out in classes, which contain 21-29 students because such a size is not common in the country. The reason for this classification is that in Saudi Arabia, classes in private schools are typically up to 20 students while those in public schools typically contain more than 30. It is also important to emphasise that there is no difference between private and public schools in terms of the system of education, such as procedures and guidelines for the assessment of students' performance, textbooks set and provided by the Ministry of Education, and the standards and regulations that should be followed in both kinds of schools. The only differences between these schools are class size and school facilities, such as better furniture and premises. There are no differences between teaching qualifications required to work in any of them.

This study focuses on four primary schools (Years 4, 5 and 6) in Alhafouf, Saudi Arabia. Two of them are state schools and the other two are private schools. The main reason for this is that in Saudi Arabia, teachers in private schools are very likely to teach small classes which consist of fewer than 20 students, whereas at state schools they could teach large classes which consist of more than 30 students. As a result, the research comprised the views of teachers who teach small and large classes in later primary education.

A considerable number of studies have been carried out in order to investigate the influence of class size on students' achievement (Wilson, 2002). Although several countries are interested in this issue, many of these studies were conducted in the USA and a few of them in Britain, with differences regarding length and scale when conducting these experiments. One possible reason for this is that class size research might be difficult to conduct and could be costly (Wilson, 2002). The data of these studies is examined to consider whether any correlation has been found between class size and students' attainment and to determine what number of students with one teacher appears to be more beneficial. Project STAR (USA) is considered to be the most important experimental research in terms of scope and size and in terms of the number of researchers who have cited this

study. According to Hattie (2005), this project consisted of approximately 6,500 learners in 329 classes in 79 schools. The study concluded that benefits of small classrooms were greater in Years 1, 2 and 3. As a result, in the early years of schooling, 15-17 students in the classroom are very likely to enhance students' performance in mathematics and reading tests. However, a number of educators point out that it is difficult to have such an improvement in performance because it depends on having similar conditions and that having 15 learners in the classroom is not considered achievable in many education systems (Wilson, 2002).

Another important study is SAGE (USA). According to Gross (2009), this study was a class reduction project, similar to STAR, which was designed as a 5-year programme. This project consisted of 30 schools within 21 school districts. The objective of this programme was to reduce the number of students in the class from 25 to 15 learners in kindergarten to Year 3. Its findings are in agreement with that of the STAR Project. The small classrooms had good results in reading, language, and maths in comparison with other class sizes. In addition, the results of this research indicate that there were no differences between classes which contained 15 students with one teacher, and classes which contained 30 students with two teachers, in order to reduce the number of classrooms needed in the school building (Hattie, 2005).

The CSPAR Project (UK) was another important study. According to Blatchford, Moriarty, Edmonds and Martin (2002), this study investigated a significant number of students aged 4 to 7 over a 3-year period and included 220 schools, with 368 classes and 9,330 learners in eight Local Education Authorities in the UK. The class sizes were different in reading, from 10 to 35 students, and in mathematics, from 15 to 33 learners. The results of this study, exploring various regressions and spline approaches, indicate that decreasing the number of students in the class led to increasing test scores, but there was little difference between classes which contained 18 students and classes of about 25 learners in reading and mathematics (Blatchford et al., 2002).

On the other hand, a number of studies found that there is no relationship between class size and student progress. According to Galton and Patrick (1990), in the Curriculum Provision in Small Primary Schools (PRISMS) survey carried out in Leicester, the classes investigated ranged from 9 to 33 students and the results showed that the relationship between class size and student progress in language and mathematics was non-significant. Studies in Canada support Galton and Patrick's view by pointing out that, in early years, in reading and mathematics, students' progress was only slightly affected by class size. In their study, students were randomly allocated to different class sizes between 16 and 37 in 62 schools (Galton, Hargreaves, & Pell, 1996). In addition, Galton et al. (1996, p.4) indicate that "...studies which fail to examine the classroom process associated with changing class size but only measure outcomes are flawed". The present study investigated the correlation between class size and effective teaching which could have a considerable impact on student attainment in Saudi primary schools.

There are a number of essential elements that need to be taken into account regarding effective teaching, such as the assessment of student performance, methods of teaching, and classroom management in terms of student behaviour and discipline. All the individual elements of the teaching process are very likely to have an influence on effective teaching (Harris, 1998). However, there is a possible relationship between the factors mentioned above and effective teaching and class size. Bourke (1986), in a study conducted in Australia, observed 63 Year 5 mathematics lessons in government elementary schools over a term, and considered a number of teaching practice variables and their correlation with class size and achievement. He found out that the teaching practices were directly affected by class size, which in turn could affect student achievement. Blatchford, Russell and Brown (2009) support Bourke's view by pointing out that class size has an impact on teaching, such as on classroom management and assessment. However, others have opposing views and argue that class size does not affect teaching and learning practices. Ehrenberg, Brewer, Gamoran, and Willms (2001) reviewed a number of studies on the topic, and argue that those studies present fundamental validity problems, and that the findings cannot be conclusive regarding the direct relationship between class size and teaching practice.

According to Boyapati (2000), teachers' methods and approaches should focus on student-centred learning where students are given the opportunity to think critically and to practice, in order to achieve higher cognitive outcomes. Teachers should reduce using methods and approaches which lead to a teacher-centred lesson, where teachers deliver information and learners receive it passively. Jarvis (2009) supports this view by indicating that the definition of the learning process has changed from a traditional educator-led process to a modern process where much of the focus centres on the student. However, class size may be one of a number of the factors that affects teachers' choices in order to determine the approach used and which they consider feasible, depending on the number of students they have. If teachers believe that it is not possible to use student-centred approaches in large classes, it can lead the teacher adopting a teacher-centred approach (Blatchford & Kutnick, 2003). One approach or method which could be used by a teacher and lead to a student-centred lesson is group work in

classrooms.

According to Blatchford and Kutnick (2003), group work is an instructional method where a small group of learners (from 3 to 4 students) work with each other to complete an academic task. The discussion and interaction between teachers and learners and among students themselves are considered to be important in any method or approach used by a teacher. This has been emphasized by Vygotsky's and Piaget's theories in terms of improving student learning and development (Blatchford & Kutnick, 2003). Conversely, one approach or method which could be used by a teacher and would lead to teacher-centred lessons is the lecture method of instruction or teacher presentation or talk. Study on the lecture method indicates that after 10 to 20 minutes of continuous teacher discourse, the learners' focus and attention decreases dramatically, and they are likely to think about things that are irrelevant to the lesson content (Cuseo, 2007). However, Bligh (1998) points out that when teachers use methods where learners are involved in active discussion of their opinions with their classmates, students are very likely to remain 'on task' in the classroom.

Blatchford, Bassett and Brown (2005) conducted a systematic observation study of students aged 10 and 11 years in small classes (25 students or under) and large classes (31 students and over) and found out that educators in large classes are likely to use whole class teaching, and ask students to work individually, while teachers in small classes are likely to use group work and are able to give attention and support to each student individually. Cuseo (2007) supports Blatchford et al.'s (2005) findings by pointing out that there is a strong relationship between class size and method. As a result, 'lecture methods' may be used by teachers in large classes, and they might not use 'discussion', while in small classes the situation could be different. This indicates that small classes can provide teachers with the opportunity to use a range of methods of teaching. Individual attention to each student is considered to be the most essential classroom process (Blatchford et al., 2009). In other words, in small classes, teachers are very likely to spend more time with each student than they do in large classes. Findings from the CSPAR Project support this point.

However, some studies, such as that of Rice (1999), claim that teachers are not likely to change their teaching strategies when they teach their students in small or large classes. In addition, in a 1992 report from the Schreyer Institute for Teaching Excellence "...a lesson presented to 20 students is probably not much different from a lesson presented to 100 students" (Nakabugo, Opolot-Okurut, Ssebbunga, Maani, & Byamugisha, 2008, p. 87).

In terms of teachers' questioning techniques, generally two kinds of questions are used by teachers. Firstly, there are questions that are seeking to obtain only 'one brief correct answer'. This approach is called 'closed question' or initiation-response-feedback (IRF). This approach might not support students' discussion process with their teachers or with other students (Rojas-Drummmonda & Mercerb, 2003). Another kind of question is the open-ended question, which may lead to more interaction between teachers and their students. In addition, these kinds of questions are very likely to help to provide students with more feedback and impact on students' progress (Galton et al., 1996). Class size is also very likely to affect the kinds of questions asked by teachers. A recent study conducted by Harfitt (2012) in Hong Kong secondary schools showed that teachers in small classes are likely to ask open-ended questions, which may lead to more interaction between teachers and their students, whereas in large classes, teachers are likely to ask their students closed questions.

Time can be considered an important aspect related to teaching methods. For example, Saudi teachers in primary schools are free to choose what they want from the methods mentioned above (group working, class discussion, and lecture style). In addition, they can choose any kind of questions during their lessons. However, they are expected to cover the whole textbook, and therefore the time available may determine their choice of method. Different size of classes could play an essential role in the management of teachers' lesson time. Betts and Shkolnik (1999) carried out a study to investigate how a difference in class size leads teachers to change their teaching methods by examining 2,170 mathematics classes. According to the study, teachers in small classes do not spend a considerable amount of time introducing new material and content, which provides teachers with the opportunity to spend more time on reviewing material already studied.

3. Data Collection and Analysis

This study aims to understand how and in what way teachers choose to work with small and large classes in relation to teaching methods, and whether class size can influence teaching practices. A survey was carried out on primary teachers' beliefs and attitudes regarding the possible effects of class size on their teaching in four schools in Alhafouf, Saudi Arabia. Two of them are state schools, and the other two are private schools. The main reason for this is that in Saudi Arabia, teachers are very likely to teach small classes which consists of fewer than 20 students in private schools, whereas they tend to teach large classes consisting of more than 30 students in state schools. The questionnaire was sent to 90 teachers to try to obtain a significant number of

responses: 30 teachers working in two private schools and teaching small classes and 60 teachers working in two state schools and teaching large classes. 67 teachers replied to the questionnaire: 30 from the private schools and 37 from the public schools. The data was then analysed using appropriate software in terms of frequencies, percentages, cross-tabulation, means and T-test.

Open questions followed some of the closed questions and were used to gather more detailed information on teachers' opinions and perceptions. The analysis of these answers tried to identify some key words and themes. Semi-structured interviews were also conducted to make up for any lack of detail and to corroborate general tendencies shown by the questionnaire results, as well as to give access to participants' narratives of their experiences. The semi-structured interviews were conducted with two primary school teachers. One of them taught in a small class at a private school and the other taught in a large class at a state school.

4. Findings and Discussion

The questionnaire data suggest that teachers in large classes use teacher presentation or lecture style with their students more frequently than do teachers in small classes. On the other hand, teachers in small classes use group or pair work with their students more often than teachers in large classes (Tables 2 and 3).

Table 2	Perceptions	towards 1	icina	different	teaching	methods
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Key word of question	Class size	Mean	
Tagehor procentation/talls	small	3.90	
Teacher presentation/talk	large	2.14	
Whole class discussion	small	2.63	
whole class discussion	large	2.86	
Cuoun/noin work	small	2.13	
Group/pair work	large	4.24	
Other methods	small	.60	
Other methods	large	.16	
Closed type questions	small	3.23	
Closed type questions	large	2.32	
On on trung questions	small	2.10	
Open type questions	large	2.86	

Table 3. T-test for equality of means

Key word of question	F	t	df	Sig
Teacher presentation/talk	12.928	6.903	64.423	.000
Whole class discussion	.083	804	65	.424
Group/pair work	2.139	-7.826	65	.000
Other methods	8.339	1.467	44.030	.150
Closed type questions	1.203	3.154	65	.002
Open type questions	3.190	-2.823	65	.006

These findings are in agreement with Cuseo's (2007) study, which found that there is a strong relationship between class size and teaching methods. Therefore, 'lecture methods' seem to be more often used by teachers in large classes. Penner (1984) states that after 10 to 20 minutes of continuous teacher discourse, the learner's focus and attention could decrease dramatically, and they are likely to think about things that are irrelevant to the lesson content. Blatchford et al.'s (2005) research supports the questionnaire findings by indicating that teachers in small classes are likely to use group work, and are able to give attention and provide support to each student individually. This is also confirmed by the teacher in a small class when he said, 'I usually use different

that are based on active learning where students can be active and they can discuss with me the content of lesson order to help them to understand.' In contrast, the teacher in the large class said, 'I tend to use lecture style more than other methods of teaching. Although I know the importance of discussion with students in class, I usually cannot use this approach or other methods such as cooperative learning because these methods need more time'.

Furthermore, the data collected on the type of questions used suggests that teachers in large classes tend to use closed type questions more frequently, whereas teachers in small classes tend to frequently use open type questions with their students. This seems to confirm Harfitt's (2012) claim that in small classes teachers are likely to ask open-ended questions which may lead to more interaction between teachers and their students, whereas in large classes teachers are likely to ask their learners closed questions that might not support learners' discussion with their teachers or with other students. A possible reason for teachers in large classes choosing closed questions instead of open ones, is that closed questions allow the teacher to have more control over the answers. Besides, closed questions are also less time consuming in terms of providing feedback.

From the above mentioned points, it could be said that students in small classes can discuss topics with their teacher in order to understand the content. However, students tend to be more passive in large classes, which could affect their learning. In addition, the small class teacher indicated that he can listen to each student's question and all students in the class can work together in order to answer such a question. However, the large class teacher commented: 'I could not usually give each student individual time - only some of them'.

When it comes to covering the textbook, the data collected shows that there is no significant difference between teachers in small and large classes (Table 4). Results are in line with Betts and Shkolnik's (1999) study, which indicates that teachers in small classes tend not to finish more of the assigned textbook than their colleagues working with large groups. One possible reason for this is that Saudi teachers, regardless of the size of the class they teach, must aim to finish the content of the whole textbook published by the Ministry of Education in Saudi Arabia (MOH, 2012). Not covering the content will result in a negative end of the year report on the teacher's performance. Besides that, the curriculum for all years is integrated, and not finishing the textbook for Year 4, for example, will affect the lessons and learning when students start Year 5. Teachers have an obligation to cover the whole textbook, even if students cannot completely follow the content. In spite of this, some participants admitted that they were unable to cover the entire textbook (Table 5). When asked to give reasons for this, teachers in both small and large classes mentioned the same factors: length of the curriculum and insufficient lesson time. However, teachers in large classes also said that the number of students in class was a reason for not being able to cover the textbook completely (25%).

Table 4. Perceptions with regard to textbook coverage

How much of the textbook do you manage to cover each semester?	All of it	Most of it
small classes	86.7%	13.3%
large classes	75.7%	24.3%

Table 5. Reasons regarding failure to cover the textbook

Key reasons from participants' responses	Teachers in small classes (N=2)	Teachers in large classes (N=8)
The length of the curriculum	50%	37.5%
Insufficient lesson time	50%	37.5%
Number of students in the class	-	25%

When it came to introducing and reviewing content however (Table 6), it seems that there is little difference between teachers in small and large classes in terms of spending time introducing new content. 64.9% of teachers in large classes 'usually' spend a lot of time introducing new content, whereas 50% of teachers in small classes 'usually' do so. Teachers' responses seem to confirm Betts and Shkolnik's (1999) claim that there is no difference between teachers in small and large classes in terms of spending time on new material and content, which provides teachers with the opportunity to spend more time reviewing material already studied. One possible explanation for the small difference in percentages in terms of introducing new content in this specific context is that the curriculum in Saudi Arabia has changed, and more content has been introduced (MOH, 2012).

Teachers may still be unfamiliar with the changes, and this may require more time in both kinds of classes.

However, the data does suggest that there is a difference between teachers in both kinds of classes in terms of time spent on reviewing content. None of the teachers in small classes report spending a lot of time in reviewing content, whereas 16.2% of teachers in large classes 'usually' do so. One possible explanation for this difference is that teachers' methods in small classes tend to focus more on students' needs than so those of their colleagues in large classes (Table 2). In large classes, if teachers pay little attention to students' learning difficulties while presenting new content, this will affect students' understanding of it, which therefore leads to an increase in the time spent reviewing the material already studied.

Table 6. Perceptions with regard to some aspects of teaching in the class

Key word of question	Class size	Usually	Sometimes	Rarely
Spend a lot of time introducing new content		50%	43.3%	6.7%
		64.9%	35.1%	.0%
Reduce the amount of content because my students cannot	small	6.7%	56.7%	36.7%
follow	large	18.9%	67.6%	13.5%
Survey of a last of time annihilation of anothers	small	.0%	26.7%	73.3%
Spend a lot of time reviewing content	large	16.2%	35.1%	48.6%
Extend the lesson	small	6.7%	53.3%	40%
Extend the lesson	large	16.2%	54.1%	29.7%
My students engage with the classroom activities	small	73.3%	26.7%	.0%

Another aspect considered was engagement with the activities done in class. Data collected in this study suggests that, from the teachers' point of view, there is no significant difference between small and large classes when it comes to students' engagement with the classroom activities (Table 6). This finding is in line with Bourke's (1986) claim that there is no correlation between class size and student engagement in large classes.

In addition, when teachers in both small and large classes were asked to give possible explanations for the factors that affect students' engagement, the same factors were mentioned (Table 5). However, teachers in large classes also mentioned limited lesson time as a factor affecting student engagement. Considering the reasons mentioned by both groups, teachers' method and approach appears as the major reason mentioned by 57% of teachers in small classes. In contrast, it is one of the least important factors mentioned by only 21% of teachers in large classes. Moreover, the number of students in class is the most important factor mentioned by 41% of teachers in large classes, while only 14% of teachers in small classes indicate this factor. One possible explanation for this difference is that teachers in large classes seem to consider class size their biggest problem and therefore, other factors become less important. On the other hand, teachers in small groups do not have to deal with this issue, and focus on other aspects they believe influence students' engagement.

It could be said that there are a number of factors, in addition to class size, that could affect students' engagement. Englehart (2011) indicates that teacher practices can have an impact on students' participation more than class size. However, in his study, small classes contained 15 students and 'large' classes contained 23. It is important to take relatively small numbers in the supposed large classes into consideration because, according to the CSPAR Project (UK), there is little difference in results between classes containing 18 to 25 students (Blatchford et al., 2002). The differences in the results in the present study may be much more significant because Saudi teachers are working in large classes with 30 to 40 students. Teacher participants in the large classes investigated seem to think that class size is the main reason for little engagement with the classroom activities. The answer to what extent teachers adopt varied teaching methods and approaches when working with small and large classes can be summarised by saying that teachers in large classes tend to use mainly a teacher-centred approach, using lecture style and closed questions, whereas teachers in small classes tend to use a variety of methods and open questions, which are more student-centred.

5. Conclusions and Recommendations

In conclusion, teachers in this study seem to consider class size one of the most important aspects that influence a number of practices in the classroom. They also mention other factors that are connected to it, such as the curriculum and individual differences between students. This seems to agree with Englehart (2011, p. 110), who argues that class size "...cannot be isolated from the various other elements which influence students" and also affect teaching. The findings from this research show that although class size is not the only factor influencing teaching, teachers in large classes believe that class size is a major aspect that impacts on the different teaching methods adopted.

A number of recommendations could be made. Most importantly, policy makers and educators in Saudi Arabia should be aware of teachers' perceptions with regard to the effects of class size on their teaching. Despite the importance of this topic, which could play an essential role in improving the quality of teaching and learning in the country, it has not been paid sufficient attention yet due to a number of factors such as political and economic motivation, and also the fact that this issue has only recently been raised by educators coming back to Saudi Arabia after their studies abroad.

Based on the results of this research and supported by other studies, it is recommended that the typical class size in Saudi primary schools of 30-40 students should be reduced to 15-20 students in order to improve the management of student behaviour, the adoption of more interactive methods, and the promotion of more individualised assessment of performance. Government officials, educators, and policy makers should work together to implement class size reductions. This can be a complex process and it is necessary to make the results of this study, and others on the same issue, known to the education authorities. They should, in turn, come to schools, talk to teachers and perhaps investigate the local needs of each city and region.

Another important recommendation is that educators and teachers should be prepared and trained to teach small classes. In other words, they should receive training on how they can benefit from fewer students in the class in order to teach them more effectively. This is probably the main reason why a number of studies have pointed out that teachers who teach large classes were unable to change their methods of teaching when they taught small classes (Wilson, 2002). When it is not possible to implement changes in class size, some strategies can be employed to minimise the difficulties teachers face in dealing with large classes. For example, continuous professional development programmes could include workshops where tactics for dealing with large classes can be discussed with participants. Teachers can share their best practices in classroom management and help each other in terms of sharing ideas, activities and strategies. At the same time, a teacher assistant system could be implemented. Unlike the UK, there are no teacher assistants in Saudi Arabia. Adopting this scheme would result in a reduction of the teacher-student ratio. Teacher assistants could also help to overcome the difficulties teachers in large classes have with regard to classroom management, the assessment of students' performance as well as providing help when it comes to giving students further support and individual time and attention.

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