



Summer schools

Background

The summary below presents the research evidence on summer schools 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 summer schools 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 summer schools 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 summer schools interventions that have been delivered in the Arab world.



Summary of the research in the Arab World

Global evidence suggests that for summer schools to develop students' learning outcomes, they should have a clear academic component, they should be intensive, well-resourced, and involve small group tuition by trained and experienced teachers. In some context in the Arab world, summer schools were used as an intervention aimed to improve the education system by expanding students' knowledge, developing their talents, and increasing their innovative and technological skills.

A random sample of 170 high school male students the Kingdom of Saudi Arabia was selected from 720 enrolled students in the new improved secondary school system during the summer semester of (2013-2014) (Al Meqbaal, 2017). Students responses on the questionnaires revealed that that this new improved secondary school system is strongly focused on developing the talents of the students and their participation in student's activities and meeting the needs and interests of the students. These summer enrichment programs aimed to also provide mental, emotional, social and physical care for students. 174 students who were randomly chosen from primary school and who participated in summer enrichment programs reported that they would benefit more from these programs if they were more focused on developing their communication and social skills. Through a structural equation model Ayoub and Aljughaiman (2016) identified to what extent gifted students' academic performance differs in light of their emotional, social, analytical, creative, practical, and implicit intelligence. Results confirmed that these predictor factors had positive and significant effects on gifted students' performance. Findings of this study suggest that students' beliefs about the nature of intelligence may be considered as one of the most important factors that affect their thinking styles and performance. The results also revealed a clear weakness in the social intelligence of gifted students, and their strengths in cognitive, mental, and other personality factors.

Summer camps were also introduced in Saudi Arabia to increase teenagers interest in mobile technologies and robotics (AlHumoud, 2014). Using App Inventor and LEGO Mindstorm NXT, high school girls were trained on a mobile programming and robotics during a two-weeks summer camp. Students' scores on the pre and post-surveys revealed a positive impact of summer camps on the development of



student's attitudes and beliefs towards the computing field. Findings of this study suggested that such programs are hoped to encourage and promote computing and engineering education and strengthen the computing curriculum in order to motivate them considering computing as an option for their future path. In another one-week summer camp program in Saudi Arabia, middle and high school students used smartphones to learn about basics for building mobile applications using web technologies programming (Al-Khalifa et al., 2019). Summer camp objectives were evaluated based through surveys and students' projects. Similar to the findings of AlHumoud (2014), results of this study showed that summer camp program increased students interest in mobile technologies; and succeeded in simplifying key programming concepts to the students and widened their understanding of the domain of programming.

In the United Arab Emirates, students in grades nine and eleven were trained for 3D printing training course in a three weeks summer program (Ahmed & Alhamad, 2018). During the summer program, students were engaged with different challenges that need to use brainstorming to come up with innovative solutions that can be implemented by the 3D printers' technology. Findings of this study showed that technology-integrated learning environments promoted students innovation and creativity of using 3D printers technologies. Additionally, it was found that students' abilities to collaborate with others, solve problems, think critically, and participate in the educational knowledge increased. It was argued that the success of this program can be attributed to, 1) the well-designed and organized course and 2) to the long experience of the instructors in using the design software and 3) the practical experience and workshops provided to students.

Indeed, teachers' role is significant to ensure the success of summer schools. In a pilot study aimed to explore two EFL teachers and 18 of their secondary students' online interaction during wiki based collaborative writing activities from a summer camp in Kuwait, results showed that the mere presence of teachers can promote students' participation but does not necessarily assist collaboration (Alghasab, 2014). Findings of this study showed that the traditional classroom teaching and learning practices shaped the way in which the teachers interacted in the wiki. For instance, the teacher adopted a more authoritative role, which was limited to



answering the students' questions, posting instructions and editing texts rather than promoting collaborative behavior among the students. This limited students collaboration and students were reliant on the teacher rather than on each other. Findings of this study suggest that for online summer school to be successful, the teacher's role should be guiding students learning and encouraging the active participation and interaction between them.

School-based summer clubs were also implemented to promote primary school children's (fifth and sixth graders, between the ages of 10 and 12) health education in Egypt (El-Katsha & Watts, 1994). The program focused on environmental health messages which have a relevance to the children's daily behavior in the village environment. Teachers were trained for teaching health and hygiene and were provided with information and materials which captured their own interest and were directly relevant to the health needs of the children. Interviews with teachers (n=11), parents, and participating students (n=60) revealed a positive impact of the project on children's knowledge and behavior and adoption of hygienic practices such as regular washing of hands before and after eating; washing vegetables and covering food; refraining from swimming in the canal.



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Summary paragraph:

Research in the Arab world about the effect of summer schools on learning outcomes is very limited. Studies in Saudi Arabia, United Arab Emirates, Egypt and Kuwait show some evidence that that summer school programs can be effective in developing students' knowledge and enhancing their communication and social skills when the course is well-designed, and teachers are well trained. Researchers have also highlighted the impact of summer school camps on promoting positive attitudes and beliefs of students towards the computing field. Some summer schools programs offered students a technology-integrated learning environment and aimed to increase their technological knowledge and skills and develop their innovation and creativity.

More research is needed in the region to establish a strong relationship between summer schools participation and learning outcomes. Further research could also look at the factors that could support a successful implementation of these programs on a variety of school subjects.



References

علي بن ناصر آل مقبل (2017). فاعلية نظام التعليم في المدارس الثانوية المطورة) نظام المقررات بالمملكة العربية السعودية من وجهة نظر الطلبة. *Dirasat: Educational Science*, 3(44), 119-136.

Ahmed, W. K., & Alhamad, I. M. (2018). 3D printing innovations in UAE: Case study: Abu Dhabi summer challenge 2017. In *2018 Advances in Science and Engineering Technology International Conferences (ASET)* (pp. 1-5). IEEE.

Alghasab, M. (2014). Wiki-Based Collaborative Writing Activities in EFL Classrooms: Exploring Teachers' Intervention in the Collaborative Process. *Research-publishing.net*.

AlHumoud, S., Al-Khalifa, H. S., Al-Razgan, M., & Alfaries, A. (2014, April). Using App Inventor and LEGO mindstorm NXT in a summer camp to attract high school girls to computing fields. In *2014 IEEE Global Engineering Education Conference (EDUCON)* (pp. 173-177). IEEE.

Al-Khalifa, H. S., Faisal, H. R., & Al-Gumaei, G. N. (2019, April). Teaching Mobile Application Development in 20 Hours for High School Girls: A Web-Based Approach. In *2019 IEEE Global Engineering Education Conference (EDUCON)* (pp. 16-21). IEEE.

Ayoub, A. E. A., & Aljughaiman, A. M. (2016). A predictive structural model for gifted students' performance: A study based on intelligence and its implicit theories. *Learning and Individual Differences*, 51, 11-18.

El-Katsha, S., & Watts, S. J. (1994). School-based summer clubs: venues for health education using a partnership model in Egypt. *Promotion & education*, 1(2), 24-28.



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Search Terms

Summer schools; summer science programs; extended school year; summer programs; year round schools, summer/holiday program.

Databases searched

Academic search complete

ERIC (EBSCO)

Education Source

Google scholar

ProQuest Central

ProQuest Dissertations

Web of Science