Examining perceptions of inclusion of deaf and hard-of-hearing students in art and design higher education in Bahrain

Sama’a Al Hashimi1*, Jameela Sadoun1, Yathreb Almahoozi1, Fatima Jawad1 and Noor Hasan1

Abstract: Despite the current endeavors by the government in Bahrain to promote inclusion of students with special educational needs, the perceptions of deaf and hard-of-hearing students’ inclusion is yet to be examined in the art or design classroom. The research involves a thematic analysis of the challenges and opportunities of inclusive education in art and design higher educational settings, and investigates the perceptions of educators, parents, and students of it. It mainly aims to provide guidelines and recommendations for the implementation of the most effective teaching approaches in art and design higher education for deaf and hard-of-hearing students in Bahrain. The study involves two stages; the first involved conducting semi-structured interviews with parents and the second stage was based upon interviews and focus groups with deaf and hard-of-hearing students enrolled in the BA Art and Design program at the University of Bahrain. The study is undertaken to determine the most effective strategies, pedagogies and approaches that can be employed by educators to enhance deaf and hard-of-hearing students’ learning process. It mainly concludes that segregating deaf and hard-of-hearing students in self-contained classrooms for theory-based courses and...
customizing the theoretical content to suit their linguistic capabilities will maximize their educational attainment.

**Subjects:** Art & Visual Culture; Graphic Arts; Design; Visual Arts

**Keywords:** deaf; hard-of-hearing; education; art; design; inclusive education

1. **Introduction**

The issue of integrating deaf and hard-of-hearing (HoH) students into university programs with their hearing peers is still debatable (Boyle et al., 2020). Proponents of integration believe that it contributes to improving academic performance and social growth of the deaf and HoH students (Alshutwi et al., 2020), while proponents of segregation believe that “the general education classrooms are not necessarily the most appropriate placement for students with hearing impairment” (Dalebout, n.d.). Some of them also suggest that making placement decisions on individual bases “is in the best interest of students with hearing impairment” (Dalebout, n.d.). Opponents of integration point out that integration may lead to problems related to language, communication, social normalization and cultural identity (Belényi, 2014). Some of them believe that when a hearing student is placed with students who are not disabled, this student is usually the only student in the class with hearing disabilities, and this may lead to a higher degree of social isolation (Aldrich, 2016). On the other hand, many inclusivists believe that isolating students who are deaf and HoH from the rest of the students may reduce their self-confidence and make them unable to communicate with others at any advanced age stage (Lesar & Vitulić, 2014). Some of these inclusivists think that it is better to integrate deaf and HoH students with ordinary students and give them common tasks to work on in groups (Lesar & Vitulić, 2014).

The decision to integrate or not to integrate deaf and HoH students in higher education has caused a lot of debate (Boyle et al., 2020; Erbas, 2017). The concept of inclusion may be conceived differently by the government, educators, parents, and by the deaf and HoH students themselves (Chupina & Warick, 2020). It also differs from a country to another, and therefore there have been diverse opinions regarding the definition of inclusion in education (Lauchlan & Greig, 2015). There are researchers who believe that “there is a wider notion of inclusion in society which goes beyond these narrowly school-based considerations (Powers, 2002, p. 2). Powers (2002) suggests that the push for inclusion may be politically driven and is based in many cases on faith and achieving social good rather than evidence and attaining the needs of the individual. This faith in inclusivity has led the endeavors to promote inclusion to, sometimes, override the attempts to maximize educational attainment. The objective of this study is to understand and assess whether inclusion is the best decision to take in order to provide the most effective higher education in art and design to deaf and HoH students in Bahrain. A growing number of deaf and HoH students are entering higher education in Bahrain, and the majority of them have chosen to specialize in the BA Art and Design Program. This paper specifically addresses the pros and cons of the inclusion of these deaf and HoH students and examines the possible difficulties that must be considered for understanding the challenges that deaf and HoH students face when it comes to adapting to the demands of an art and design degree. This is a preliminary, exploratory study aimed at optimizing the academic, physical and social environment for deaf and HoH students who enroll in the BA Art and Design Program at the University of Bahrain. In order to achieve this, a number of questions must be addressed including whether full integration or the allocation of separate classes that take into account deaf and HoH students’ needs will be a more effective approach. If inclusion is to be implemented, then would social rather than academic integration be more effective? Should inclusion be regarded as relating to attendance with non-disabled students within the same mainstream setting? Or is it possible for deaf and HoH students to feel included while attending the same university and sharing some activities with their non-disabled peers, but attending classes within a segregated program that targets their specific needs? Would the provision of a customized Diploma in Art and Design program that suits their needs and abilities help
maximize the benefits that students can gain from their educational experience, and help in building the groundwork for effective teaching and learning?

In order to find answers to the above-mentioned questions, observation, in-depth interviews with relevant personnel and academics and focus group discussions with deaf and HoH students and their parents at The University of Bahrain were used to gather data for this research. The aims include investigating the best pedagogical approaches and practices and exploring the current teaching and learning challenges of teaching art and design to the deaf and HoH. Another aim is to recommend teaching approaches that can be used effectively to facilitate art and design teaching of the deaf and HoH. The study also seeks to help art and design educators meet their particular deaf and HoH students’ learning needs and guide their thinking and practice so that they can create the most effective educational opportunities and experiences within an art and design learning context.

1.1. Research Problem & Significance

The Bahraini government has provided various resources, services and facilities to ensure that deaf and HoH students get proper inclusive education opportunities (UNESCO, 2015). However, it is important to note that effective global practices and trends need to be examined, and hence some aspects need to be improved upon benchmarking them with literature-based international standards. Inclusion may not necessarily be the most beneficial option for deaf and HoH students unless it is applied according to international recommendations with the availability of the necessary accessibility services, assistive devices, physical settings, equipped classrooms, specialized interpreters, and appropriate teaching materials (Layton & Borg, 2019). The situation can be more complex and attitudes towards inclusion may change whenever the resources and facilities are lacking and very limited (Alothman, 2014). Shortage of quality skilled educators, who know sign language and are qualified in special needs education, and specialized interpreters to help the deaf and HoH students in Bahrain is still a significant problem in higher education (the number of interpreters who were assigned for the art and design deaf and HoH students by the Ministry of Education is only two and are not specialized in art and design). Another problem that seems to emerge is the misconception that art and design programs are the most suitable for deaf and HoH students and that these specializations only involve practical skills such as drawing and painting. There seems to be lack of awareness among some deaf and HoH students and their parents about the substantial amount of theoretical content that needs to be delivered as part of these academic programs in addition to the advanced technical and programming skills that students need to acquire in order to develop interactive projects and digital applications (University of Bahrain, 2015). This awareness is important in determining the decisions that students will make while pursuing their higher education, and in maintaining their sustainability in the art and design program. Serious efforts have to be tackled and exerted particularly in implementing effective teaching strategies, sufficient resources and facilities, and appropriate learning materials so that educators and students can minimize the possible difficulties and challenges and maximize the benefits that the students can gain from their educational experience.

Although the challenges and perceptions of including deaf and HoH students in higher education are well discussed in literature (Adkins, 2020; Krishnan et al., 2020) and are not uncommon to other countries across the world, they have hardly been discussed in the context of art and design higher education and have not been explored within the context of Bahrain. Therefore, the investigation focuses on the challenges of including the deaf and hard of hearing in Bahrain’s higher education, and on the perceptions of including deaf and HoH students in the BA Art and Design programmes in Bahrain’s higher education. Thus, the rationale for this study is to highlight and reveal the pros and cons as well as the peculiarities of their inclusion in art and design programmes in Bahrain’s higher education institutions. By increasing research coverage in this area in Bahrain and the region, it is hopeful that more educators of deaf and HoH students in art and design disciplines would be encouraged to explore and implement effective teaching approaches based on successful international practices. It is also hopeful that higher education
institutions and stakeholders would be encouraged to make more productive and robust decisions related to inclusive or non-inclusive education in art and design contexts.

1.2. Research objectives

- To investigate the challenges faced by deaf and hard-of-hearing art and design students and their educators, and their attitudes and preferences

- To explore educators’, students’ and parents’ perceptions and attitudes towards inclusive education for deaf and hard-of-hearing students in art and design higher education in Bahrain

The ultimate aim is to provide a set of policy guidelines and recommendations that may encourage the inventive and effective use of teaching approaches and strategies by educators to guide their endeavors to support their deaf and hard-of-hearing students in art and design educational contexts.

1.3. Research questions

1. What are the most inventive and effective teaching approaches and strategies that art and design educators can employ to support their deaf and hard-of-hearing students?

2. What are the challenges faced by deaf and hard-of-hearing art and design students, and by their educators?

3. What are the benefits and risks of the implementation of inclusive education for deaf and hard-of-hearing students in art and design higher education in Bahrain?

4. What are educators’, students’ and parents’ perceptions, attitudes, and preferences towards inclusive education in art and design higher education contexts?

2. Materials and methods

In view of the research objectives and questions, an explorative qualitative approach was mainly adopted by employing interviews, a focus group, and a questionnaire. The methodology of this research included two data collection approaches; First, semi-structured focus-group interviews with a purposive sample of eleven deaf and HoH students were carried out to investigate their perceptions, challenges, experiences, and preferences, and to obtain more knowledge about their attitudes towards inclusive education. These students are in their orientation year and have been accepted in the BA Art and Design Program. They were recruited because they were the first batch of deaf and HoH students to be accepted for admission into the Art and Design Program. Second, a questionnaire and in-depth semi-structured interviews were conducted with the parents of these eleven students to explore their preferences and attitudes towards inclusive education, and to consider their suggestions to enhance deaf and HoH students’ learning experiences. The researchers conducted the interviews and focus group in a classroom with the presence of an interpreter. The questions were raised and the responses that were translated by the interpreter were transcribed by art and design students, who helped the researchers with data collection. To ensure credibility and integrity in the application of the undertaken data collection methods and the precision in which the results accurately represent the data, several measures were taken in accordance with the guidelines of validity and reliability in qualitative research outlined by Noble and Smith (2015). These measures included engaging five researchers in this study to minimize research bias, asking participants to comment on the interview and focus group transcripts to confirm that the findings and analysis accurately reflect their perceptions, and applying data triangulation through employing different data collection methods and perspectives to reach more comprehensive findings (Noble & Smith, 2015). In addition, a questionnaire was also conducted with the sample to support the other data collection methods and to ensure an accurate understanding and validation of the statements that had been supplied through the interpreter during the focus group discussion. The questionnaire was also mainly conducted in order to allow deaf and HoH students to choose from a list of four options (Table 1) in order to
Table 1. The four options that deaf and hard-of-hearing students were asked to choose from in order to indicate their most preferred educational approach

| Option | Description                                                                 | Responses |
|--------|------------------------------------------------------------------------------|-----------|
| 1      | Inclusion that involves being taught by professors that do not know sign language with the presence of interpreters | 1         |
| 2      | Inclusion that involves being taught by qualified professors, with no interpreters | 0         |
| 3      | Segregation that involves being taught by professors who do not know sign language with the presence of interpreters | 2         |
| 4      | Segregation that involves enrolling in a special diploma program, being taught by professors who know sign language and having qualified interpreters in classrooms equipped with required assistive technologies, with the possibility of continuing in the bachelor’s degree upon successful completion of the diploma | 8         |

indicate their most preferred educational approach. Moreover, in order to ensure that ethical standards are consistently maintained, the guidelines mentioned in the LSA Revised Ethics Statement (Linguistic Society of America (LSA), 2019) were followed throughout the execution of the study, and the recommendations by McKee, Schlehofer, and Thew regarding ethical issues in conducting research with deaf populations were also considered (McKee et al., 2013). As part of adhering to the ethical guidelines, the students and the parents were given consent forms to sign, the objectives of the study were explained to them before data collection began, and their identities and data were kept confidential in accordance with Personal Data Protection Law (PDPL), which is the main data protection regulation in Bahrain that was modelled on European Union data protection laws, and which came into force in 2019. The focus group and all the interviews were audiorecorded and then transcribed and given to the participants for reviewing as part of the validity process. Additionally, one of the deaf students volunteered to verify that the data are accurately interpreted and transcribed. This study was completed over a one-year period. The data analysis procedures were based on descriptive and thematic analysis. Thematic analysis is a qualitative research method whereby the researcher aims to find themes within the data through recognizing and organizing patterns in content and meaning (Willig, 2013 as cited in Cleminson, 2019). Thematic analysis allows a piece of research to reflect reality (Cleminson, 2019). To apply thematic analysis, we banded findings from the interviews and focus groups into common themes and sub-themes, thus allowing the data to be examined in a more systematic and structured way. Two main themes were found, with some emergent sub-themes. The two main themes were:

First Theme: Analyzing Students’ Experiences, Challenges, Preferences and Perceptions

Second Theme: Evaluating Parents’ Attitudes, Preferences and Perceptions

To begin data analysis into the First main theme, a master table was constructed to organize the data into the following categories and subthemes: The Deaf and Hard-of-Hearing Students’ Challenges, The Deaf and Hard-of-Hearing Students’ Preferences, The Deaf and Hard-of-Hearing Students’ Perceptions and Experiences. On the other hand, the second theme was categorized into the following sub-themes: The Parents’ Attitudes and Preferences, The Parents’ Perceptions and
Experiences, and The Parents’ Suggestions and Recommendations. First, data were drawn through reading the transcribed text and reflecting on its content. Second, relevant statements and insights were typed directly in-line. Third, the statements were analyzed and banded in accordance with the main themes and sub-themes.

3. **Theoretical overview: current global realities and initiatives in deaf education**

Recently, the global interest in effectively educating the deaf and HoH increased, thus also facilitating their constructive engagement with society. There are a number of universities that offer programs specifically designed for deaf and HoH students such as Gallaudet University in the United States, National Technical Institute for the Deaf (NTID), Howard College: SouthWest College for the Deaf in the United States, Doncaster Deaf Trust; Communication Specialist College in the United Kingdom, and King Saud University as well as Prince Sattam Bin Abdulaziz University in the Kingdom of Saudi Arabia.

Gallaudet University is considered one of the most prominent universities for the deaf and HoH. The university has two colleges, which are the College of Arts and Sciences and the College of Education and Business Administration. The academic body at the university is all deaf, and the university offers more than 70 courses within various disciplines including digital media, graphic design, photography, theatre, business management, accounting, information systems and mathematics. All subjects are taught in American sign language and English, with the implementation of modern methods of education using code books and signaling in addition to translator services. Gallaudet University consists of many buildings and facilities; the Klerk Support Center, for instance, is a laboratory that provides users with high-quality online technical support. It provides an interactive forum for the user community, a place to ask questions, review publications from other users, solve technical and applied problems, and share knowledge. The students can communicate with the Center via text messaging in order to reserve any device they need to borrow. The University also consists of a training laboratory for students and staff, a registration studio with all the necessary equipment, and a control room equipped with green screen photography equipment and allows students to record with various devices and edit their recordings.

Hearing impairment is one of the disabilities that affect educational attainment, as it affects linguistic development, and necessitates the use of senses other than hearing to gain awareness of the surroundings. In order for the deaf and HoH student to be competent with other peers, audio notes must be converted into visual notes through the use of strategies in education that depend on other sense channels, such as sight, smell, touch and taste.

Studies have shown that some of the most effective classroom practices and considerations that educators of the deaf and HoH students should follow during the educational process include the following (Downs et al., 2000):

Educators should pay attention to the light source directed towards them while teaching because standing next to the lighting will lead to shadows on their faces and it may disturb vision, making it difficult for deaf and HoH students to read lips or see facial expressions.

Educators must avoid talking while deaf and HoH students cannot see their faces, such as when they are writing on the board or walking in the classroom. They should not stand in front of the projector so that students can see their faces clearly.

If the educator uses a microphone while explaining the lesson, the microphone must be placed under the mouth so that deaf and HoH students can read the lips.
Educators must support the lesson with visuals as much as possible, and when referring to an item on the board, they must be specific and mark it directly. When the educators are introducing a video to the class, they must make sure that there is a caption or translation below the video.

Tables and chairs should be arranged in a semicircle so that students can see all of the class clearly. It is also preferable to place deaf and HoH students at the front of the class so that they can see the professor, translator and other students clearly.

Educators should keep the noise in the classroom to a minimum, because deaf and HoH people are very sensitive to environmental sounds and noise disperses and disturbs them (Downs et al., 2000).

Deaf education is changing and must not rely on traditional teaching methods; It is moving towards the collaborative learning (Aristizábal et al., 2017), active learning, and deaf-centered curricula that adapt content to suit the capabilities of deaf and HoH students (Skrebneva, 2015). There are a number of different methods that have been applied in some universities for teaching deaf and HoH students. One of these methods is Speech Reading, which is an oral method that emphasizes verbal appearances in the environment (Downs et al., 2000). Another method is Auditory Training, which is considered one of the modern methods used in teaching people with hearing disabilities. This method is based on exploiting the remaining sense of hearing that exists in the students and aims to develop their capabilities in speaking and distinguishing between different voices (Downs et al., 2000). A third method is the Manual Method (Sign Language), which is an alternative to the spoken language. It is based on the use of sign language, which involves symbols and gestures made by hands that are moved in a certain way with the rest of the body (Downs et al., 2000). These movements are organized and arranged in a certain way that is easy to understand and learn by people with a hearing disability. There are six accepted parameters for sign language: handshape, location, movement, number of hands, palm orientation and non-manual signals (Tatman, 2015). Handshape refers to the shape and posture of the hand; Location refers to where in space is the hand when the sign is produced; Movement refers to how the hands move during sign production; Non-manual signals refer to facial expressions and body gestures (Tatman, 2015). The number of hands used and their relationship to each other is also among the parameters as well as the orientation of the hands.

Deaf and hard-of-hearing students receive information in different ways; through the interpreter, lip reading, or through an auxiliary listening device (ALD) and a similar speech system for C-print speech transcription.

The intelligence level of students with hearing disabilities may from that of students without hearing disabilities (Almomani et al., 2021). Studies have indicated that hearing loss can negatively impact cognitive abilities (Almomani et al., 2021) and communication, which causes them to lag behind their peers in language development (Amemiya et al., 2016). Additionally, researchers noted that deaf and HoH individuals have poor short-term memory in comparison to their hearing peers (Talli et al., 2018). According to a research conducted by The Kennedy Center (John & Kennedy Center for the Performing Arts, 2014), the reading level of deaf and HoH students of all ages in the United States remains below the fourth-grade level. Based on these limitations of the deaf and HoH, the teacher needs to repeat the concepts for them, and provide educational activities that are appropriate to their capabilities and needs by supporting education with visual, tactile, and various motor experiences, in addition to learning in small groups while reducing the curriculum to meet the slow pace of their learning (Al Asim, 2018; Wapling, 2016).

In Jordan, researchers at Princess Rahma University College in Al Balqa Applied University conducted research that involved twelve deaf and HoH students who were enrolled in the Arabic Language Program. The researchers noticed that these students had difficulty in grasping the
grammatical topics and therefore they examined the effectiveness of collaborative learning in developing deaf and HoH students’ grammatical and linguistic skills. The researchers emphasized that the Arabic sign language has different grammatical rules from the rules of the Arabic language, which constituted a difficulty for deaf and HoH students and led to their failure in acquiring the basic concepts and structure in grammar. The researchers found that collaborative learning, which involved students working with each other in groups and teaching each other contributed significantly and positively to the improvement in their personal and social skills. It allowed students to participate and learn from each other in small groups through dialogue and interaction with each other and with the teacher, and ultimately led them to acquire knowledge, skills and attitudes and achieve the desired goals (Yasmeena et al., 2012).

In Egypt, researchers at Ain Shams University conducted research that involved translating one of the lessons of a course titled “Printing the Template for the Basic Colors and Geometric Shapes” in the Art Education Program in a primary school into sign language (Asma’a & Mohammad, 2019). The results of their research indicated that translating art terminology yields effective results and leads to better learning and communication. The researchers recommended that attention be given to translating the main keywords into sign language and collecting terminology within a special dictionary for the deaf and HoH in the rest of the disciplines and in all stages of education. They also recommended adjusting the curricula for the deaf and HoH and translating them to sign language, which is considered to be the mother tongue of deaf and HoH students.

In Oman, researchers indicated that it would be difficult to establish specialized departments for deaf and HoH students in a society with a small population. Therefore, deaf and HoH students must be integrated with non-disabled students, due to the limited number of deaf and HoH students on the one hand, and the smaller number of students who want to pursue higher education or who have the qualifications to continue. Omani researchers believe that students need to be more adequately prepared in the school to enter the university (Hassan et al., 2016). Some students are unable to write more than two sentences due to insufficient vocabulary (Hassan et al., 2016). The limits of sign language have made the written abilities and the linguistic skills of the deaf and HoH limited. The main obstacle among deaf and HoH students is their limited linguistic capabilities and their limited short-term memory, which results in difficulty expressing their perceptions or knowledge (Hassan et al., 2016). The curriculum is very dense and not adapted to the capabilities of deaf and HoH students, their sign language and cognitive level. The educators are not qualified to teach deaf and HoH students and attempts to qualify them are usually limited to a sign language training course. Additionally, placement of deaf and HoH students with varying degrees of hearing loss and putting together those who have cochlear implants and those who do not and teaching them the same curriculum may negatively affect their performance, and impede their learning development process (Hassan et al., 2016). Hassan et al. (2016) also stated that each learning concept requires deaf and HoH students nine times the amount of time needed for non-disabled students to grasp it. The greatest potential for deaf and HoH students is in applied and artistic skills (eg. drawing, design, theater, sports, etc.) in which they can outperform other non-disabled students (Hassan et al., 2016). In theoretical and basic sciences, however, it is difficult to equate deaf and HoH students with their non-disabled peers. Despite the above-mentioned limitations and difficulties, Hassan et al. (2016) outlined a number of requirements that can facilitate the inclusion of deaf and HoH students in higher education. The requirements included the provision of competent sign language interpreters who master sign language and understand the terminology related to their specialization and courses. The requirements also included adapting the curricula and evaluation methods to suit the capabilities of deaf and HoH students, setting specific criteria for their admission, and preparing the cadres who will work with them, including administrators, academics and language translators, through interactive training workshops. Furthermore, because deaf and HoH students have weaknesses in terms of expression, spelling, language and vocabulary when they graduate from schools, it is usually difficult for them to enroll in undergraduate programs (Hassan et al., 2016). Therefore, in order for the probability of success of their placement or inclusion to be greater, Hassan et al. (2016) believe that it is necessary to think about planning an entire academic year as a preparatory year that
focuses on completing the deficiencies in their linguistic, in communication skills, and technical skills. This preparatory year will involve offering them courses and lectures carefully selected from specific practical disciplines, in order to gain enough experience to prepare and qualify them to enter progressively to college. If the students pass their preparatory year program, they can be registered in Baccalaureate programs. One of the most important recommendations made by Hassan et al. (2016) is paying more attention to pre-university attainment and coordinating between the university and high school education in order to ensure that students are well-prepared and more qualified to enter universities. Hassan et al. (2016) also conducted a field survey and in-depth interviews, which showed that deaf and HoH students have greater capabilities and potential in practical fields and aspects such as drawing, design, and sports than in theoretical disciplines such as science, humanity, mathematics, science, and physics. They suggest that based on this observation, universities may have to turn toward practical and professional majors, such as art, design, mechanics, and computer in the education of the deaf and HoH, and may have to exclude theoretical disciplines. According to them this is what is commonly applied in many universities which offer programs for deaf and HoH students regionally and globally. They also indicate that although most of the universities that have introduced deaf education to their programs are offering lectures to deaf and HoH students in the same halls as non-disabled students, and although this cuts a lot of costs, they still believe that it is an unwise approach.

In the Kingdom of Saudi Arabia, King Saud University offers bachelor’s degrees in art education for male and female deaf and HoH students and Physical Education for male students. One of the conditions for admission is to enroll in a preparatory or orientation year to compensate for possible shortages in some skills and capabilities. As for the academic program, it is the same program and curriculum offered to non-disabled students (Hassan et al., 2016). The university provides a number of support services to deaf and HoH students including sign language interpreters, assistants who write summaries of lectures, transportation services, and housing. Recently, a center called “Sign Language and Deaf and Hard of Hearing Studies Center” was established at King Saud University. The center focuses on Arabic language skills, sign language translation, support services, training and consulting, and scientific research. The experience of King Saud University in higher education for deaf and HoH students is considered the most successful of all experiences in Saudi Arabia and the Gulf region so far.

In Ghana, researchers investigated the uses of visual teaching or visual art forms in teaching and learning in schools for the Deaf. They define the term “visual teaching” as “the use of visual art forms such as pictures, illustrations, sculpture pieces and real objects to facilitate teaching and learning in the Schools for the Deaf” (Obosu et al., 2013, p. 413). They indicated that the use of visual art forms in teaching the deaf and HoH plays a significant role in the success of deaf education as it helps in strengthening memory in deaf students who have to rely so much on visual communication to get information. They stated the following:

“Art applies itself significantly in the education of the deaf. Art teachers can thus be seen as very important in the field of special education. By using artistic channels to teach, the academic skills and self-concepts of deaf students are developed. This is because art provides student-centered experiences that are adaptable to every aspect of the school curriculum and to all skills areas (Schulz and Turnbull, 1984).” (p. 412)

However, the results of their study showed that the educators in Ghana do not have adequate skills to teach visually. They recommended that educators employ a lot of visuals and body gestures to demonstrate their academic content to deaf and HoH students. They also cited the following important statement by Oppong (2003); “[…] deaf students require a specially trained teacher, special methods of teaching and specially designed curriculum to enable them to function well in society” (Obosu & Opoku-Asare, 2016, p. 22). In this regard, their study contained an outline of the options available to educators when designing a curriculum for deaf and HoH students. They stated the options as follows:
The development of a curriculum specifically for students who are deaf and hard-of-hearing

The application of the general education curriculum, while attempting to meet the same standards and expectations that apply to hearing students while providing special services and approaches

The use of the general education curriculum but with a reduction in the level of complexity

The use of a curriculum designed for a lower grade level

In Greece, at the Faculty of Arts of the Technological Institute of Athens, which offers programs in Interior Architecture, Decoration and Product Design, the admission of the deaf and HoH students was based on specific criteria, which were considered fairly favorable for them (Tsoumas, 2016). A personalized program was prepared for each deaf and HoH student, under which each student worked with one or more interpreters during workshops, examinations, and theoretical classes. However, according to Tsoumas (2016) the special entrance examinations for deaf and HoH students were abolished in 2009 and they were required to take the same exams with the hearing students, but unfortunately nobody succeeded.

In Bahrain, deaf and HoH students are accepted into the Sheikhan Comprehensive Speech Center in the elementary and intermediate stages. In the year 2015, His Excellency the Minister of Education inaugurated a project to integrate a group of deaf and HoH students into two secondary schools; Isa Town Secondary School for Boys and Al Noor Secondary School for Girls (Al Ghaeb, 2019). The Minister of Education stated that the integration procedure depends on special conditions and criteria according to the type of disability and its severity, and the psychological readiness of the student to be integrated who is able to learn according to the medical reports and tests conducted by the competent department in the ministry (Al Ghaeb, 2019).

Since 2005, students with hearing loss have been integrated by the Ministry of Education into different educational stages, and the educational cadres were equipped with the necessary competencies that enable them to deal with deaf and HoH students. Students have been encouraged to participate in events and camps that are held in Bahrain and neighboring countries (Ministry of Education, 2019). They were provided with the necessary devices and hearing aids. In 2015–2016, the Special Education Department at the Ministry of Education appointed five interpreters. In 2016–2017 the speech therapy program was implemented, whereby 33 speech therapists were distributed over 64 schools serving 150 students (Ministry of Education, 2019).

As for students with hearing loss, it is allowed to adapt the curriculum according to the degree and severity of the hearing loss. This is especially applied in courses that involve listening skills in Arabic and English, where students are individually introduced to listening topics, and sometimes speech is converted to text for severe cases (Ministry of Education, 2019).

The percentage of students who suffered from deafness or hearing loss in Bahrain public schools during 2016–2017 was 0.01%, and their number reached 16 students, according to the statistics issued from the Department of Educational Statistics in the Ministry of Education (Ministry of Education, 2019).

The first group of deaf and HoH students integrated into the Ministry of Education schools graduated in the 2017–2018 academic year. Their number was twelve students, including six females and six males, who were accepted into the University of Bahrain in the Bachelor of Arts and Design program. The University of Bahrain accepts deaf and HoH students (as is the case with all other disabilities) in its various colleges from the beginning of its establishment. The university takes into account the provision of support services to meet all their educational and psychological needs and facilitates their presence in the university.
Despite all these global and local initiatives, the debate on whether to integrate or not to integrate deaf and HoH students in higher education is still ongoing and the effectiveness of inclusion remains inconclusive (Lauchlan & Greig, 2015). Researchers still argue that there is not enough evidence that mainstream settings provide a fully effective inclusive environment with opportunities for high-quality social and academic learning experiences (Lauchlan & Greig, 2015). Lauchlan and Greig (2015), for instance, stated that even students who are included in mainstream settings “can in a very real sense be ‘excluded’ when teachers make use of withdrawal ‘units’, streaming or within-class grouping. Such partial segregation nevertheless constitutes a way of trying to offer a curriculum that is suited to the individual needs of a child.” (Lauchlan & Greig, 2015, p. 80). The specific needs of deaf and HoH students and the need to communicate with the translator still causes them to be stationed in an inclusive classroom as a separate unit from the group, or as a small group that works independently and as such it is not wrong to assume that a class unit still exists, especially since there are two different speeds of classroom teaching in a parallel time. This finding was stated by Tsoumas (2016) after examining the experiences of deaf and HoH who received inclusive education at the Department of Interior Architecture, Decoration and Product Design at the Faculty of Arts of the Technological Institute of Athens. His observations led to the following statement:

“Nevertheless, in both cases we will observe that, despite these very significant initiatives, the treatment of deaf students still remains ‘special’. Deaf students did not seem to be an integral part of the totality of a class, but instead they were either a unit ‘detached’ from the set, or members of one smaller, specific group which operated autonomously, being “protected” and “fortified”. So the unity of class seemed to be inexistent as there were two different teaching speeds in parallel time.” (Tsoumas, 2016, p. 6)

Some researchers regard social and academic inclusion as potentially contradictory with one another. They think that students in mainstream classes may be less likely to have access to the specialist assistance and services that will help them attain their maximum academic potential (Lauchlan & Greig, 2015). On the other hand, the dilemma is presented because when students are taught in special non-inclusive settings they may feel socially excluded. This leads to difficulty for students, parents, and even researchers in reaching a conclusive decision on whether deaf and HoH students should be integrated or segregated. Therefore, it is important to further investigate the effective practices, strategies, resources and support needed to cater for the learning needs of deaf and HoH students in order to achieve a balance between allowing them to academically and socially participate in shared educational activities with their “non-disabled” peers, while successfully pursuing their individualized educational goals. The next section documents teaching strategies, practices, and technologies that are effective with deaf and HoH students in the art and design classroom.

4. Results; Evaluating and Analyzing Students’ and Parents’ Experiences, Challenges, Preferences and Perceptions of Inclusive Education in Art and Design

This section presents the results of the study in order to investigate and analyze the specific experiences and challenges of deaf and HoH students who are enrolled in the BA Art and Design Program at the University of Bahrain. Their preferences and perceptions as well as those of their parents will be explored and analyzed. Semi-structured focus-group interviews with eleven deaf and HoH students were carried out to investigate their perceptions, challenges, experiences, and preferences, and to obtain more knowledge about their attitudes towards inclusive education. A questionnaire was also conducted with the sample to obtain an accurate understanding of some information that had been supplied through the interpreter during the focus group discussion but were not clear, and to obtain information on other issues not captured during the discussion. These students were in their orientation year and have been accepted in the BA Art and Design Program. Moreover, a questionnaire and in-depth semi-structured interviews were conducted with the parents of these eleven students to explore their preferences and attitudes towards inclusive education, and to consider their suggestions to enhance deaf and
HoH students' learning experiences. The respondents were brief on the essence of the study to get their responses and feedback. The focus group discussion was conducted in a classroom at the University of Bahrain and an interpreter was present. Overall, nine parents and eleven students participated in the various discussions. The students' responses were interpreted by the interpreter and were recorded using observation checklist and the parents' responses were recorded using a recording device. Data collection took a span of five months.

3.1. Analyzing students' experiences, challenges, preferences and perceptions
Currently, there are some challenges facing deaf education in Bahrain which may not have been recognized by educators and authorities. This section provides an analytical perspective for identifying some of the challenges that the deaf and HoH face in art and design education and some of the proposed solutions for these challenges.

A total of eleven students participated in this study, consisting of five male students and six female students. It is important to mention that all the students learned in special needs schools until they finished secondary school and were only transferred to government schools to receive inclusive education during their high school. Students within this study all use the unified Arabic sign language (ArSL) to communicate. All eleven deaf and HoH students in this study had moderate to profound permanent hearing impairment.

3.1.1. Students' perceptions and experiences
In order to determine whether the students perceive themselves as capable of successfully meeting and adapting to the BA Art and Design program requirements, they were informed that the approach to teaching in the program depends on creativity, innovation and unconventional thinking, and that it is based on rivalry among peers to achieve distinctiveness and excellence. They were then asked if they believe that they can meet all the above-mentioned requirements and achieve excellence. A number of them indicated that they need a treatment of their own that is different from non-disabled students, as they believed that it is not possible to compare them in terms of creativity, speed and innovation with their hearing peers. A noteworthy statement by one of the respondents in this regard was; "It is not possible to compare the understanding of the student who can hear with the deaf student who needs more time to transfer the information and therefore it takes more time to understand what is presented in the lecture".

They also all agreed that the instructor must explain the course content in a slower speed in order for them to have enough time to understand what is explained, and they mentioned that they need a longer time to absorb the content than their hearing peers. One of the students, for instance, stated, "I need lengthy explanation and even re-explanation sometimes". Another student stated, "I need more time because I have to wait for the interpreter to convey the information after the instructor explains it". This was also reiterated by another student who stated, "I and the rest of my deaf peers need more time to absorb the material due to the time taken to transfer it to us via the sign language interpreter". In addition, one of the students indicated, "I need one-to-one supervision from my instructor while I work on any assigned task". Time was a recurrent issue and hurdle that they repeatedly complained about as it seemed to be the main topic of their concerns, as most of them also mentioned that the time allotted for the exam was not enough. Accordingly, one of the students stated, "I will need more time during the exam because I rely on the interpreter who will pass on the information and the question to me in sign language and so I will need extra time when answering".

All of the students agreed that it is necessary to have either an interpreter or a professor who understands the sign language. They believed that there is a need to qualify the course professor through learning sign language. This helps them to easily absorb and understand the information. In an attempt to emphasize the importance of the interpreter, one of the students stated, "Certainly, the presence of a well-versed and proficient sign language interpreter contributes to
the transfer of information and reduces the gap that arises from the lack of direct listening to the professor or peers and facilitates the understanding of the material presented”.

3.1.2. Students’ suggestions and recommendations

The students were asked to give suggestions for developing university teaching methods and techniques in arts and design classes and facilitating their academic experience. One of the students suggested employing new educational techniques and strategies in art and design education through motivating educators to develop tailored programs that can be updated and renewed. Another student gave a number of suggestions including providing students with a cultural base that includes updated skills and information in the fields of fine arts and design, keeping pace with continuous and developed technological developments, and providing an educational environment based on encouraging and motivating students to be creative and innovative. One of the students also recommended that it is necessary to keep abreast of technological developments and trends in teaching deaf and HoH students in the field of art and design. The majority of the suggestions and challenges that the respondents discussed revolved around the interpreter, who they seemed to consider as one main factor that could determine the success or failure in their educational experience. Accordingly, one of the students stated, “I hope that those who are in charge begin to work hard to provide qualified interpreters and are able to clearly use sign language and that we deaf students participate in selecting and nominating the translator, because it is our language and it is important for us to choose an efficient translator both from inside Bahrain or from outside because our future is in the hand of the interpreter”.

Regarding the role of the interpreter, another student stated, “The interpreter must have clear references and must be knowledgeable about the terminology of the specialization”.

3.1.3. The challenges and difficulties that were encountered by students

As for the challenges and obstacles that were encountered by the respondents, all of them indicated that they faced complications due to the difficulty of the theoretical material, the inefficiency of some interpreters, in addition to the fact that the presence of interpreters is not allowed in the examination hall. They mentioned that among the most difficult courses they took were Islamic Education, Computer, English and Arabic Language. Finding these courses difficult is not unexpected as these courses depend on theoretical content which required good linguistic and communication skills. It is, therefore, important to focus more on qualifying deaf and HoH students

Figure 1. The students’ opinions on the extent to which their schools contributed to qualifying them for higher education.

To what extent did the school curriculum contribute to your qualification for university education?

- Not at All
- Slightly
- Moderately
- Extremely

Number of Responses
and equipping them with sufficient skills and knowledge in these fields in school prior to their enrollment in higher education. Some students themselves might not be fully aware that additional focused attention in school may need to be given to the disciplines that they found difficult, and therefore when they were asked to what extent the school curriculum contributed to their qualification for university study, six of the students indicated that the curriculum contributed extremely to their qualification for university study. One student indicated that the curriculum contributed slightly, and two students indicated that the curriculum has moderately contributed to qualifying them for university. On the other hand, only two students indicated that the school curriculum did not contribute to their qualification for university study (Figure 1). These students’ statements suggested that more attention needs to be given to the provision of the necessary skills and appropriate knowledge acquired during school and the first orientation year at the university.

3.1.4. The most effective strategies for teaching deaf and hard-of-hearing students
When asked to mention and suggest the most effective strategies that have contributed positively to providing them with the necessary skills and knowledge and that have been employed with them in the school and must continue to be employed at university, two students stated “nothing”. One of the students stated that there has not been any progress or advancement due to the employment of traditional teaching strategies. However, one of the students indicated that there were some useful strategies that were employed in the school. He stated, “one of the most effective approaches was collaborative learning because it enables students to acquire the skills of identification, comprehension and execution.” Other effective approaches that the students mentioned include: “building strong relationships with the student to strengthen his/her sense of security and self-confidence; establishing an annual plan for students with hearing disabilities that effectively contributes to the implementation and evaluation of programs and activities; holding intensive training courses in special education for teachers of hearing students to help them gain experiences and skills that would make them able to deal with students with special needs, which may facilitate the educational integration endeavors.”

The students mentioned additional difficulties and challenges that they considered to be negative aspects of inclusion or integration in higher education. They stated that the non-spread of knowledge of the sign language among their hearing peers and among their instructors has led to difficulties in communication. Moreover, their inclusion with their peers sometimes limits the
special attention that the instructor would otherwise give them if they were segregated and prevents them from getting lectured by an instructor who is qualified in sign language as well as from having an interpreter in all their lectures, and especially during exams. One of the students expressed his desire to choose an efficient translator and suggested that deaf and HoH students should be given the opportunity to be involved in choosing their interpreters, and to ensure that they are qualified and equipped with prior knowledge about the subject matter and the topics that will be discussed during the lecture. Another student stated, “I prefer segregation because it will allow us to repeat our questions and have discussions even about the simplest things”. This was also reiterated by another student who also indicated that he prefers segregation and stated, “In light of the current circumstances and the lack of qualified interpreters, we prefer not to integrate because we need an opportunity, and we need the explanation to be repeated to ensure that information is conveyed to us clearly”. Some students also stated that they had difficulty with the English language because they only know the Arabic sign language. One of the students indicated that “an inclusive approach that involves the same curriculum for the deaf and the hearing students is very difficult because the teacher uses speech to communicate, while deaf students need sign language to communicate. The non-disabled students are fast in learning, communicating, and understanding what the teacher explains, which may make the teacher neglect the deaf students”.

Despite all the aforementioned negative aspects of integration, some students mentioned positive aspects and made the following statements; “Inclusion has some benefits through allowing deaf and HoH students to interact with hearing students and acquire life skills with them”; “I prefer integration because hearing students help us in many things and we learn from each other.”; “Deaf and HoH students have the right to be integrated in order to allow them to engage in normal life and to achieve academic, social, and psychological growth in addition to achieving self-satisfaction and increasing their motivation towards learning and towards forming healthy social relationships with others”.

3.1.5. The most preferred approaches for teaching deaf and hard-of-hearing students
Students were given the four options listed in Table 1. Their responses (Figure 2) showed that one student chose the first option (Inclusion that involves being taught by professors who do not know sign language with the presence of interpreters). No students chose the second option (Inclusion that involves being taught by qualified professors, with no interpreters). Two students chose the third option (Segregation that involves being taught by professors who do not know sign language with the presence of interpreters), and the majority of students (eight) chose the fourth option (Segregation that involves enrolling in a special diploma program, being taught by professors who know sign language and having qualified interpreters in classrooms equipped with required assistive technologies, with the possibility of continuing in the bachelor’s degree upon successful completion of the diploma).

3.2. Evaluating parents’ attitudes, preferences and perceptions
A set list of open-ended questions was written down and presented to a group of nine parents. Based upon their responses their attitudes, preferences, and perceptions towards inclusion have been evaluated. The questions revolved around the following issues; the difficulties and challenges that parents and their deaf and HoH daughters or sons faced during their academic journey, the various approaches, resources, and tools that were utilized by the respondents to aid their children, the pros and cons of inclusive education, and the suggestions that could contribute to facilitating the educational process and raising the educational level of deaf and HoH students in Bahrain.

3.2.1. Parents’ Perceptions of the Challenges that they and their Children Faced
When asked about the difficulties and challenges that they and their deaf and HoH children faced, most of the parents stated that there weren’t enough facilities that could aid their children with their education. According to them, they did not have the appropriate facilities
and qualified staff to deal with deaf and HoH students. They stated that there were limited facilities in Bahrain, which provide educational programs and courses for deaf and HoH students. The parents stated that apart from Sheikhan Comprehensive Speech Center, some schools seem to take in deaf and HoH students and allow them a grace period until they are able to meet the requirements. One parent, in particular, stated that although some schools may accept the child with open arms, some schools were not equipped to provide the necessary environment for the student, and the student is eventually left to deal with educators or translators who may be impatient or simply not qualified to deal with deaf and HoH students. A common difficulty that parents faced was that there is one interpreter for all the subjects and this interpreter cannot communicate with all the parents at all times. Furthermore, with some subjects and classes that their children would take, some terms or words happened to be quite complex and did not have an understandable form of translation through sign language. In addition to that complexity, one parent really stressed the effect that these challenges may have on the child’s mental health, and how some translators fail to do their job right and fail to communicate with the parents efficiently.

In order to help their children overcome the aforementioned challenges, and to aid them with their education, the parents applied various attempts and endeavors. One of the effective approaches was the use of visuals in various forms such as illustrations, pictures, and infographics. Some parents said that they learned and mastered the sign language in order to be able to communicate with their children and to have the ability to teach, revise and discuss their assignments and projects with them. They also tried to read and understand the course materials carefully to be able to deliver the summary of the lesson and find the best way to make the subjects easier for their children to understand. They tried to be up-to-date with the school’s requirements, and to have a strong connection with the school. One of the students’ parents mentioned that his daughter herself has internal self-motivation and she does not need the support to keep being a good student. Although some of the parents stated that “resources were limited”, they tried to utilize every available or possible tool or resource to aid and support their children. They said that they were given identity cards that stated their disability and through it they were able to obtain certain privileges and scholarships. In addition, some stated that their children relied on their friends who were in the same position while others relied on social media and applications such as WhatsApp. Unfortunately, WhatsApp was the only application that the parents mentioned when asked about the tools and technologies that their children used to minimize communication difficulties. Dictation applications and other devices and assistive technologies that can assist deaf and HoH people were not mentioned. This may indicate that there isn’t enough awareness among the students and their parents about the available technologies and tools for the deaf and HoH.

3.2.2. Parents’ Perceptions and Attitudes towards Integration and Segregation
In an attempt to explore the perceptions and attitudes of the parents towards integration and segregation, the researchers asked the parents about their opinion regarding offering a special diploma and bachelor’s programs for deaf and HoH students in various universities in Bahrain without merging them with hearing students. The researchers clarified that this suggestion is made in an effort to focus on effective educational strategies and using the appropriate equipment, assistive technologies and resources for deaf and HoH students. Five out of the nine parents agreed with this suggestion. One of them indicated that having students with the same abilities under one class will increase their social skills and confidence, which will help them learn even more faster especially when they have good learning tools and equipment. On the other hand, the rest of the parents mentioned that it would be preferable to merge their children with hearing students in order to allow them to have a social and interactive experience. One of the parents mentioned that it is hard to decide because there are pros and cons for each option. Hence, the respondents were asked more specifically about the advantages and disadvantages of inclusion. All the parents agreed that inclusion would help the students gain social skills and “break the ice with their classmates”. One of the parents commented that “it will help them to earn better marks
because of the social interactivity, and it will also help their hearing peers acknowledge the existence of deaf students within society so they can treat them well and pay them respect”. Nevertheless, when asked about the disadvantages of integration, most of the parents agreed on two main disadvantages; communication difficulties and bullying. Some parents believe that integrating students within a social environment with classmates from different backgrounds can lead the deaf and HoH students to get bullied by the others because of their inability to communicate. According to some of the parents, this bullying can cause greater harm such as lowering the students’ self-esteem and deterring them from participating or asking questions in the classroom.

3.2.3. Parents’ Suggestions and Recommendations

Finally, the parents had several suggestions that they believed could contribute to facilitating the educational process and raising the educational level of deaf and HoH students in Bahrain. Some parents suggested that authorities and educational institutions should focus on finding competent and informed translators who are knowledgeable of the effective teaching strategies for deaf and HoH students. They also stated that it is important to provide the students with proper motivation and the educational environment that helps them grow and obtain skill sets that they do not have. One of the parents suggested the minimization of the required course materials and assignments to make their sons and daughters feel more capable of studying. The parents all agreed that schools must have more qualified teachers to teach deaf and HoH students. They believe their sons and daughters were not fully qualified or prepared at school and the parents themselves had to hire private tutors in order to provide more effective education for their children. They emphasized that this issue should be resolved from early education in schools to prepare them for higher education. Accordingly, they stated, “If the problem remains unresolved we will have unqualified deaf and HoH students who cannot complete or even get into higher education”. Therefore, the next section attempts to propose all the necessary recommendations to decision-makers, educators, parents, and students to maximize the possibilities and opportunities of successful outcomes for deaf and HoH students in higher education.

4. Discussion and recommendations

The findings of this study have revealed that it is very important to pay attention to pre-university educational circumstances of the deaf and HoH students and to focus on the coordination between the university and their schools in order to minimize the challenges that these students face in the university. The students and parents’ perceptions suggested that schools must exert more effort to qualify and groom deaf and HoH students into creative, productive and potentially successful individuals and to stimulate them to develop and achieve their fullest potential to meet the challenges of higher education. According to parents recommendations, this can be achieved via a number of approaches such as preparing students for the university and coordinating with the university at the secondary level, and paying more attention to the effective strategies and approaches known and implemented globally in the education of deaf and HoH students. To avoid negative perceptions and unsuccessful experiences, the students and their parents must be aware prior to enrollment in the university of all the requirements, objectives, and outcomes of the programs that they will specialize in. Their educators, also, must be given enough training to prepare them for teaching deaf and HoH students. It is vital for both the educator and the interpreter whether at school or university to be qualified enough to understand and be able to deal with deaf and HoH students’ hearing disabilities, desires, tendencies, and psychological and social needs. The educator must be prepared to contribute not only to the skills and knowledge of the students but also to the development of their mental, emotional, physical, linguistic and communicative capabilities. In order to achieve this, the educators and interpreters at schools and universities need more training and resources to manage and teach deaf and HoH students. There must be criteria and standards for hiring interpreters in schools and universities and these criteria must be based on research as well as surveying students’ needs and preferences. It has become evidently clear from the statements by the deaf and HoH students who participated in this study that the role of the interpreter in a deaf student’s education is as important as the
educator, if not more. Many of the challenges that they faced could be either maximized or minimized based on the presence or non-presence of a qualified interpreter, who is knowledgeable of the peculiarities of their specialization. For instance, the students will be less anxious if the interpreter is allowed to enter the examination hall, especially whenever the educator does not know sign language. The translator or interpreter must be familiar with the specialization and the course content as well as the terminology that will be translated and must have prior knowledge of it. This will facilitate the translation process through minimizing the time that may be wasted by the professor in explaining the content to the interpreter while also attempting to explain it to the students. Another aspect that will undoubtedly facilitate the teaching process and will allow for faster information transfer is offering sign language courses and workshops to educators, and also to the non-disabled students. It would be ideal to even introduce a sign language course as part of the general university requirements and also as part of the school requirements. This will encourage deaf and HoH students to communicate and interact with their hearing peers, thus providing a suitable learning environment and motivating them to be more expressive, communicative, and creative. Another very important element that may help in providing a suitable learning environment is providing the necessary and latest assistive technologies, devices and advanced software that can assist deaf and HoH students in comprehending the educational material.

Periodic reports about deaf and HoH students’ performance, academic level and behavior need to be prepared by educators in order to help them and other educators track the progress of each student and evaluate the effective teaching approaches that may lead to the best possible learning outcomes. Educators need to review and understand the student’s individualized educational plan (IEP) in order to provide individualized teaching strategies and approaches that meet each student’s needs and capabilities. The IEP is an individualized education plan that a team composed of educators, interpreters, specialists, and parents work together on in order to allow educators to become aware of a student’s interests and capabilities and the content and approaches that previous educators used with that student. Including parents’ feedback, insights, perceived challenges and recommendations in the IEP, and allowing parents to participate in discussions and talks in order to convey their suggestions to educators and interpreters will help in guiding their academic decisions.

Providing inclusive or non-inclusive education or a hybrid approach that involves both is not an easy decision to make, and relying only on students’ and parents’ perceptions is not enough to make the right decision because each approach has pros and cons, which may be exacerbated by other factors. These factors may include the context in which the students are, the program that they are enrolled in, and whether their schools prepared them effectively for higher education. The findings of this study, which were based on a thematic analysis of students’ challenges and their as well as their parents’ perceptions, seem to suggest that achieving a balance between both approaches in an attempt to get the benefits of each approach may lead to positive outcomes. In art and design higher education context, offering some of the courses, especially theory-based courses, in a self-contained classroom instead of mainstreaming deaf and HoH students into general education classrooms may lead to better learning outcomes. This will allow for the customization of the course material to suit their limited linguistic skills. On the other hand, the deaf and HoH students may be integrated with the rest of the students and achieve the social and academic benefits of inclusion in some practice-based courses that suit their aptitudes. Smith and Benito (2013, p. 396) described this as the hybrid or mixed model as it provides “a combination of standalone courses and integrated courses while integrating students through extracurricular activities and residential life”.

Based on the literature review and the findings of this study, which were drawn within a context that brings out the peculiarities of higher education in Bahrain, there seems to be great potential in the development of a diploma program at the University of Bahrain in which the courses can be adapted to the needs of deaf and HoH students and conformed to the international standards and
strategies for teaching them in laboratories and studios designed according to international standards, conditions and studies. The students may be enrolled in the diploma program for two years and are merged with the other students enrolled in the Bachelor of Arts and Design program only in some practice-based courses. The theory-based courses, on the other hand, may be tailored to their capabilities and the teaching strategies and assessment methods may be individualized to suit each student’s needs. Minimizing theoretical content and providing readable materials for this content is very important, as deaf students rely on memorizing theoretical data due to their inability to formulate constructively coherent language, and their limited ability to textually express their ideas.

Hence, upon the completion of the diploma program, the students have the option of continuing for another two years to get their bachelor’s degree in Art and Design. Allocating the program to the deaf and HoH students guarantees obtaining a diploma that qualifies them to the work industry even if they were not able to continue and obtain a bachelor’s degree. It also helps in achieving the following benefits:

It enhances chances for getting support from sponsors and stakeholders.

It ensures that the classrooms are suitable for their needs and equipped with all the technological means allocated to them.

It allows the instructor to teach them high quality standard learning because the number will be limited and the instructor can slow down or repeat the explanation without affecting the students who do not suffer from hearing difficulties. Instructors will be able to employ visual teaching through the use of a lot of visuals and body gestures to demonstrate their academic content to deaf and HoH students.

It enhances opportunities for cooperation and agreements with international universities for the deaf and HoH, which in turn will enhance the chances of students continuing postgraduate studies at one of these universities and paves the way for launching a mutual program.

It opens the door to inviting instructors from international universities to give lectures to students in sign language, noting that some of these instructors are also deaf and HoH and communicate with their students in sign language.

It can ensure the facilitation of administrative procedures and bureaucratic matters related to students and give priority to the review of letters and correspondence that they send to authorities concerning their needs and problems.

It gives the scope, time and attention needed to qualify sign language interpreters and teach them various English terminology, which should later be interpreted by them into sign language.

The above-mentioned recommendations will guide educators and help higher education institutions in Bahrain in providing the labor market with students who have special qualifications and skills such as creative artwork, effective communication with all sectors of society, good service in the area of art, design and IT. This will allow for the creation of new fields of work and job opportunities, both in public and private sectors for the deaf and HoH.

5. Conclusions
This study employed thematic analysis as a methodological approach to explore the perceptions of including deaf and HoH students in the Art and Design programmes of Bahrain’s higher education institutions to underscore the pros and cons of inclusion. It focused on reaching the most effective ways to facilitate higher education in art and design for deaf and HoH students. It was conducted in a Bahraini cultural context in an attempt to investigate the idiosyncrasies of teaching art and design to
deaf and HoH students in Bahrain’s higher education institutions. The limitation of this research is that deaf and HoH students had difficulty in understanding the administered questions even with the help of sign language interpreters. They also had difficulties in articulating their opinions and experiences through the use of language. Additionally, the number of deaf and HoH students are limited to eleven individuals who are still in their orientation year and are unable to evaluate the specialization courses in the program and form their attitudes towards inclusive education and make their decisions based on a hands-on experience and evaluation of the program in all its stages. Based on the perceptions and recommendations of the students and parents who participated in this study, the researchers suggest that early interventions with deaf and HoH children are most likely to give better future education. Schools and specialized centers must prepare deaf and HoH students for the university level by hiring more educators who are specialized in special needs in all subjects. Researchers also recommend the preparation of qualified Bahraini translators specialized in all subjects taught by the Ministry of Education schools to deal with deaf and HoH students. The Ministry should ensure their mastery of sign language so that educational institutions will have sign language interpreters with a high level of professionalism. Another significant recommendation is to offer sign language courses for normal students in schools and universities. It will reduce the chances of bullying among students through opening channels of communications with them. The implication and recommendations of this study will contribute to the Ministry of Education, higher education institutions, and educators in Bahrain and guide the development of a customized curriculum and of pedagogical strategies, especially for teaching art and design to deaf and HoH students.

In conclusion, the thematic analysis in this study focused on two main themes; the first related to students’ perceptions and challenges, and the second involved analysis of parents’ perceptions and recommendations. The findings from the students’ perspective showed that most students preferred segregation because deaf and HoH students feel comfortable among their peers with hearing impairment. Students also stated that the time allocated to them will be of a quality that ensures their understanding and fulfill the requirements without the pressure of having normal peers who may not understand their need for extra time (to understand what the instructor said through the interpreter’s translation). The results also indicated that the majority of students prefer to enroll in a diploma program specially designed for them, with the possibility of continuation for outstanding students who wish to obtain a bachelor’s degree in the BA Art and Design Program upon the completion of the diploma program.

On the other hand, the findings from the parents’ perspective revealed that they believe their sons and daughters were not fully qualified or prepared at school. They emphasized that this issue should be resolved from early education in schools to prepare them for higher education.

In regard to the pros and cons of inclusive education, parents agreed that inclusive education has pros and cons at the same time. They believe that inclusive education can allow their children to have social and interactive experiences with non-disabled peers, and this will prepare them for the real world after they graduate. On the other hand, they think that inclusive education can cause psychological issues for their children as a result of communication difficulties with non-disabled students, and this may lead them to be bullied by their classmates.

Parents gave some suggestions that could contribute to facilitating the educational process and raising the educational level of deaf and HoH students in Bahrain. The suggestions are:

1. Authorities and educational institutions should focus on finding competent and informed translators who are knowledgeable of the effective teaching strategies for deaf and HoH students.

2. Educational Institutions must provide the students with proper motivation and the educational environment that helps them grow and obtain skill sets that they do not have.
(3) The required course materials and assignments must be minimized in order to make deaf and HoH students feel more capable of studying.

(4) Educational Institutions must have more qualified educators to teach deaf and HoH students.

In answering the research questions that this study raised, we believe that the findings will inform the field of special education in art and design in general, and in the Kingdom of Bahrain, in particular. In doing so, we hope to advance the theoretical basis on which educators are teaching art and design to deaf and HoH students. This can be accomplished if researchers and educators acknowledge that this growing population requires targeted teaching strategies, services, specialized assessment, careful educational placement options, and calculated considerations to integration or segregation to meet its needs. Offering some of their lectures or courses in self-contained classrooms instead of mainstreaming them into general education classrooms may lead to better learning outcomes. Integrating them, especially in practice-based courses, which do not involve any theoretical content will allow deaf and HoH students to benefit from the pros of inclusion and to form healthy social relationships with the rest of the students. At the same time, segregating them in self-contained classrooms for theory-based courses, or perhaps customizing the content of these courses to suit their linguistic capabilities will maximize their educational attainment.

In addition to the necessity and importance of empowering the deaf and HoH and providing their educational rights, they are an important productive capacity that must be better empowered and supported. Giving utmost attention to university education for the deaf and HoH provides an advanced humanitarian image of society, and an opportunity for this group of citizens to contribute effectively to the art and design field, locally and globally.

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Author details
Sama’a Al Hashimi1
E-mail: dr.samaa.alhashimi@gmail.com
E-mail: samaa.alhashimi@gmail.com

Yatheeb Almahoozo1
Fatima Jawad1
Noor Hasan2

1 University of Bahrain, Madinat ‘isā, Bahrain.

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