

## Interaction design to develop skills of disabled children using the one-piece printing clothe

**Dr. Nahla shabaan shahata**

Lecturer at Fashion Department The high institute of applied art, Art & Design  
Academy 6<sup>th</sup> October City

[Dr.nahlah.s@gmail.com](mailto:Dr.nahlah.s@gmail.com)

**Dr. Hala Abu Elfath Ali Abu Shady**

Lecturer at Graphic Department The high institute of applied art, Art & Design  
Academy 6<sup>th</sup> October City

**Dr. Emad Said Shamandy**

Instructor of Engineering Education Optics Institute Ex. Manger Ministry of Higher  
Education

[emadshamandi@gmail.com](mailto:emadshamandi@gmail.com)

### • **Summary:**

Interactive design is an innovative language that evokes a variety of responses in the recipient, and children with special needs are those children who different from who are considered by the community as ordinary children. They are the most need an educational and creative methods to communicate with them positively and solve their problems, This Interactive design puts them in a state of integration and reflection through positive communication, and show the importance and necessity to find new strategies to stimulate, claim and develop their skills and imagination Through the role of the designer to innovative creative designs based on intelligence, wisdom and creativity. And applied it in an attractive manner to the one-piece printing clothe using smart textiles in proportion to their own abilities to develop their skills and give them a chance for understood and accepted.

Creativity is an interactive process not limited to the creator according to, but is a recipe for the recipient, especially children with special needs to be revealed this new and accept and deal with it after this interaction attracted attention and attention and impact to respond to him, and thus show the importance and the need to find new strategies to revitalize and claim and develop their skills And their imaginative ideas through the role of designer, where this research deals with the creation of innovative creative designs based on interactive with these children intelligently and wisely and creativity, and applied in an attractive way to the piece of clothing using smart textiles to suit the abilities of children People with special needs to develop their skills and to give them the opportunity to understand and accept the language of creative and visual communications technical and educational to the maximum extent, through the provision of innovative interactive designs and work to achieve the desired goals to achieve them.

### • **The study contains three basic points:**

- **First:** interaction and interactive designs in modern times:

The intellectual, scientific and journalistic medium circulated the concept of interactivity in the early nineties of the last century as a result of the tremendous progress in digital technology and modern means of communication, which was acquired by the recipient thanks

to the characteristic of participation in the communication process after they was confined to messages from television, radio and newspaper. The concept of interactivity is linked More Multimedia the concept of interaction has been linked to the concepts of freedom, democracy, participation and dialogue. It has been embodied through the advancement of means of communication.

- **Second:** Interactive design and its relationship with the development of the skills of children with special needs:

Attention to education and skills development are important issues for all groups of society because it is important to allow all people to get what they want in life and to interact with the data of life and access to equal opportunities even those who have difficulties in learning and social adaptation such as deaf and dumb, The mentally challenged, physically disabled, and emotionally disturbed. Therefore, people can benefit from various technological means that help them to learn and develop their different skills.

And a child with special needs is different from the rest of the ordinary children in the ways of interaction with him speech and educational and guidance, as it does not benefit from the traditional ways to deal with it. So it is necessary to take into account this difference and the use of strategies and methods modern and contemporary attractive and fun to help them to harmony and positive interaction with their parents and peers and teachers and with the means Educational use with them whether that means art or even play.

- **Third:** Smart fabrics and their relation with interactive designs directed to children with special needs:

Employing fashion arts and integrating them with the various interactive arts to educate children with special needs and develop their skills, creative ideas that can support this art in a rich and effective way can also be used in many other artistic, creative and applied fields. Smart fabrics are materials that have systems Includes sensors and mechanical actuators to complement the components of the surrounding nature. It interacts with users and the environment in ways that are predictable to any external variable, causing a reaction in which a change in one of its mechanical, electrical or external properties or even in its functional activities is made to fit with this interaction. These textiles are based on the idea of integrating elements of modern technology with human aspects and different mental abilities.

- **The research aims to:**

Highlights the role of interactive designs as an educational, creative and entertainment connection that contributes children with special needs problems through developing their interactive abilities in the society.

- **Research importance:**

- 1 - The interactive design very important to give the recipient (children with special needs) an effective role to help them on their psychological and educational problems.
- 2 - How to benefit from interactive design and employment in the field of textile printing to improve the abilities of children with special needs and their interaction with educational and creative environment in the society.

3 - Explain the importance of the use of smart textiles and printing methods to improve the variety of performance and quality of the product when applied and adapted to the education of a specific category of the society.

• **Research hypotheses:**

Researchers assume that the interactive designs in non-stereotyped ways of printing fabrics for children with special needs to develop their interactive abilities and creativity can be applied to Egyptian society in a contemporary fashion stander.

• **search limits:**

- Objective boundaries: Study of the smart fabrics and their relationship to the interactive design directed to children with special needs and methods of printing and implementation on the one piece printing clothe.

- Time boundaries: Study of interactive designs and their printing methods on the one piece printing clothe to suit children with special needs within 6 months from the beginning of the development of the research idea.

- Spatial boundaries: Study the interactive designs applied to the one-piece printing cloth locally and globally, and the work of virtual applications to suit children with special needs in Egypt.

• **Research results:**

1. Access to some good interactive designs that develop good and positive skills of children with special needs.

2. The success of using smart fabrics in interactive communication in intellectual technologies with creative designs ideas to build a better society.

• **Recommendations:**

1. Designers in Egypt should support creative ideas to suit the needs of children with disabilities and develop their own abilities.

2. Satisfying the needs of people with special needs both mentally and physically, through the creation of innovative ideas that help them integrate into society and improve their intellectual, educational and creative abilities.

• **Rferences:**

1. Zayid Ahmad: Alosrah wa altufula- dirasat aijtimaeia wa antharubulujia, kuliyat Albanat , Jamieat Eayan Shams , Alqahra , Dar almaerifah aljamiea, 1994.

2. Ghyth Muhamad Atif: Qamus eilm al'iijtimaie, kuliyat Aladab, Jamieat Alqahira, Alqahra, Alhayah Almisriat aleamat lilkitab, 1979.

3. Albaz Marwa Muhamad: Turuq tadriss Zwyi alaihtiajat alkhasa - Tukhasas eulum, kuliyat Altarbia, Jamieat Bourseid, Qism almanahij waturuq altadris, 2015.

4. Alqumsh Mostafa Nuri - Almeayta Khalil Abdalrhmn: Sayakulujiat alatfal zewy alaihtiajat alkhasa - Muqadima fi altarbia alkhasa, Amman, Dar almasirah lilnashr waltawzie waltibaah, Altabaah aloula, 2007.

5. Sadov, F.; Kochagin, M.; and matetsky, A.; "chemical technology of Fibrous Materials" Mir Publishers, Moscow, 1978.

6. Shenai, V. A.: Technology of printing, Vol. (4), Third edition, 1990.
7. Abdalatyef Tamer: "Alqim altafaulia lyelan almajalah almatbuaah wadawriha fi amaliat aleqnaa", Mutamar kuliyyat Alfunun Altatbiqiah alduwalii alththani, Dimiat, Ras Albar, 2002
8. Mahmoud Jyhan Fuad Hamad: "Mstaqbal altasmim Izwy alaihtiajat alkhasah fi daw' altasmim altafaouly", Almutamar alduwali 13 lilfunon altatbiqiah, Altasmim bayn alaistimrariah walaistidamah, 2012
9. Esmael Ola Muhamad Samir: "Athar estikhdam alnasij fi tatwir altasmim aldakhili altafaoly", Almajalah alalmiah lilbohoth alsinyiah almasriah, Almojalad al'awal, aladad althany, Abril, 2012
10. Aljma Mohamed Abdalh I: "Tariykh almalabis alzakayah watiknuluja almostqbal", Mujalad Edarat Munazmat almalabis aljahizah, Almarkaz alqawmii lilbohouti, 2004
11. Towmy Fadylah: "Tecnologia aletsal altaolyah welaqteha balbht alelmy fy aljameah aljazayria", Majalat aleulum alensaniah walejtimaeh, Jamieatan Qasidi Mirbah - waruqilat, Aljazaer, Aladad 6, Maris 2011
12. Shfyq Nihal Afifi Muhamed: "Esitidam altaqniat alhadithah lilmansujat alzakayah fi tahsin aladaa alwazifii llmlabs", Risalat dukturah, Qism almalabis aljahizah, Kuliyyat Alfunun Altatbiqiah, Jamieatan Hulwan, 2013
13. Shahatah Nahla Shaban: "Aldynamikiah fi nazariat alkhidaa albasry watatbiqaha alaa alfan alislamy litbaet aqmishat almualaqaat biasalib tiknulujiyah mukhtalifa". Risalat Dukturah, Qism Tibaet Almansujat walsabaghah waltajhiz, Kuliyyat Alfunun Altatbiqiah, Jamieatan Hulwan, 2016
14. Albaz Marwa Muhamed: "troq tadrish zwyi alehtiajat alkhasa", Tkhasos Oluom, Kuliyyat Altarbiyah, Jamieat Bourseid, Qism Almanahij waturuq altadrish, 2015
15. <https://www.mawdoo3.com> 15/3/2018
16. <https://www.notonthehighstreet.com> 15/3/2018
17. <https://www.crookedbrains.net> 11/2/2018
18. <https://www.babyccinokids.com> 1/2/2018
19. <https://www.inhabitat.com> 15/3/2018
20. <https://www.boredpanda.com> 11/2/2018
21. <https://www.pinterest.com> 15/3/2018
22. <https://www.hawaaworld.com> 1/2/2018