

Innovating Women's Outerwear Designs for Special Bodies in light of TRIZ Theory

Sahar Aly Zaghoul Aly

Associate Professor of Fashion Design, Department of Fashion Design, College of Designs, Qassim University, Saudi Arabia

Professor of Fashion Design, Department of Clothes and textile, College of Home Economics, Helwan University, Sah.ali@qu.edu.sa

Maram Muhammad Abdulkarim Al Jarbou

Doctor of Philosophy student in clothing design and production track Fashion Design, Department of Fashion Design, College of Designs, Qassim University, Saudi Arabia, 392200484@qu.edu.sa

Abstract:

This research aims to study the partial physical defects of a woman's body that are of a special nature (partial physical defects), to benefit from the principles of TRIZ Theory of Inventive Problem Solving, to identify the foundations that international fashion designers have addressed when designing clothes that suit some physical defects, to provide design proposals for outer clothes features of bodies of a special nature (partial physical defects) in light of TRIZ theory. The descriptive approach was used and applied for being suitable to achieve the research objectives. The tools included a questionnaire to measure the opinions of specialists, a questionnaire to measure the opinions of female consumers, and the results resulted in the following:

1-There are statistically significant differences at the level of (0.01) between the opinions of specialists for the proposed designs with regard to aesthetic aspects, design No. "2" obtained the preference over the designs for partial defects "chubby arm," followed by designs (first, third, fourth), and Design No. "3" The highest score is for the designs of partial defects "big tummy", followed by designs (second, first, fourth). As for designs of partial defects "large chest", design No. "3" received the highest score, followed by designs (fourth, second, first).

2-There are statistically significant differences (0.01) between the opinions of specialists for the proposed designs with regard to functional aspects when, and Design No. "1" achieved the preference for designs for partial defects "chubby arm", then followed by designs (second, third, fourth), and Design No. "3" took the lead for designs of partial defects "big tummy", followed by designs (second, first, fourth). As for designs of partial defects "large chest", design No. "3" achieved first place, followed by designs (fourth, second, first).

3-There are statistically significant differences between the opinions of consumers at a significance level (0.01) for the proposed designs. By reviewing the opinions of consumers in terms of the preference of the designs for partial defects "chubby arm", design number "1" achieved first place, then it was followed by the designs (second, third, Fourth), Design No. "3" came in the lead for designs of partial defects "big tummy," followed by designs (second, first, fourth). As for designs of partial defects "large chest," design No. "3" achieved first place, followed by designs (fourth, second, first).

4- There is a correlation between the ranking of the proposed designs by both professionals and consumers, amounting to (0.876), which is a statistically significant value at the level of (0.01), and it is a direct relationship that indicates the presence of great agreement between their opinions.

Keywords:

Innovation - women's outer clothes - Bodies with a Special Nature - Triz Theory

References:

- 1- Abdel Basset, N. R. (2019). Creating designs inspired by the aesthetics of Ebro art using computer programs, Journal of Architecture, Arts and Humanities, (16). Arab Society for Islamic Civilization and Arts, Cairo.
- 2- Abu Al-Ghaith, Y. F. (2010). The comprehensive encyclopedia in obesity treatment, Dar Al Yaqeen for Publishing and Distribution, Cairo.
- 3- Abualtibr, O. A., Gismalla, B. G. and Khidir, F. H., Abdelrahim, N. A. (2016). Is There an Association between Periodontitis and Duct Ectasia, Periductal Mastitis Complex, Sudan Medical Journal, (3), Sudan Medical Association.221-234.
- 4- Abu Jado, S. M. (2012). TRIZ program for developing creative thinking, Debono Center for Teaching Thinking, Jordan.
- 5- Abu Musa, E. F. (2008). Fashion design and development, Dar Al-Zahra, Riyadh.
- 6- Ahmed, K. S. and Zaghoul, S. A. (2007). Foundations of fashion design for women, World of Books for Publishing, Distribution and Printing, Cairo.
- 7- Al-Ahwal, A. S. (2019). The effectiveness of a proposed program based on the principles of TRIZ theory of innovative solutions to problems in treating some difficulties, Journal of Educational and Psychological Studies, 13(1), Sultan Qaboos University, Oman.
- 8- Al-Arfaj, M. A. (2016). Optical illusion art as a source of Fashion designS in innovation to address the Problems of body types Of women, Master Thesis, College of Design and Home Economics, Qassim University, Qassim.
- 9- Al-Fadhli, S. A. (2018). Functional anatomy and sports mechanics, College of Physical Education and Sports Sciences, University of Baghdad, Baghdad.
- 10- Al-Hajjaya, M. S. (2016). Mutah Research and Studies, Humanities and Social Sciences Series, Mutah University, Jordan.

- 11- Al-Hazza, H. M. (2009). Encyclopedia of nutrition and anthropometric measurements of humans, Bahrain Center for Studies and Research, Academically: International, Manama.
- 12- Ali, M. H., Asaad F. Qasim, H. A. and Jalab, R. W. (2023). Breast Cancer MRI Classification Based on Fractional Entropy Image Enhancement and Deep Feature Extraction, Baghdad Science Journal, 2(1).
- 13- Ali, N. A. (2023). A proposed teaching model based on combining the theories of Deans and Trees to develop some mathematical concepts and design thinking skills among kindergarten children, College of Education Journal, (41), Faculty of Education, Port Said University, Cairo.
- 14- Al-Jamal, F. A. (2019). Utilizing the art of optical illusion in designing three-dimensional weft knitted fabrics to address some of women's physical defects, International Design Magazine, 9(2), Scientific Society of Designers, Cairo.
- 15- Al-Khader, N. I. (2018). Creating women's fashion designs inspired by Christian Dior fashion trends, Master Thesis, College of Design and Home Economics, Qassim University, Qassim.
- 16- Al-Matroudi, M. S. (2023). Design treatments using fiber optics for women's body types, International Design Magazine, 13(1), Scientific Society of Designers, Cairo.
- 17- Al-Musayqir, A. R. (2001). How to get rid of obesity How to get rid of obesity, Dar Al Qalam for Publishing and Distribution, Dubai.
- 18- Al-Ruwaili, S. K. (2019). The effect of using a teaching strategy based on the TRIZ ideal theory in improving inquisitorial thinking in mathematics among middle school students in the Kingdom of Saudi Arabia, Journal of the Islamic University for Educational and Psychological Studies, 27(4), Islamic University of Gaza, Scientific Research and Postgraduate Studies Affairs, Gaza.
- 19- Al-Shaibi, H. I. (2019). Visual illusion in creating clothing pieces for obese women using embroidery with plastic pieces, Journal of Arts, Literature, Humanities and Social Sciences, (45), Emirates College of Educational Sciences, UAE.
- 20- Al-Shaibi, H. I. (2018). Creating designs by merging traditional Indian fashion and Chinese fashion, Journal of Arts, Literature, Humanities and Social Sciences, (31), Emirates College of Educational Sciences, UAE.
- 21- Al-Shalhoub, S. A. (2019). A proposed enrichment program based on integrating the principles of TRIZ theory with skill activities for international study and its impact on the level of achievement in light of its fields and the development of strategic competence and adaptive reasoning among middle school students, Journal of Scientific Research in Education, 7(20), Girls College of Arts, Science and Education, Ain Shams University, Cairo.
- 22- Asiri, J. M. (2019). A proposed program based on TRIZ theory to develop the skills of creative solution to chemical problems among female students, Reading and Knowledge Magazine, 217, Faculty of Education, Egyptian Society for Reading and Knowledge, Ain Shams University, Cairo.
- 23- David Gunn, M. D. (2017). Innovation, Hindawi CIC Foundation, United kingdom.
- 24- Domb, E., (1998). TRIZ in School District Administration, Journal, Vol (3), No (16), February.
- 25- Issa, Y. M. (2014). Foundations of fashion design and style, world of books, Cairo.
- 26- Issac, L. and Teoh, K. (2010). Eco Efficient Product Design Using Theory of Inventive Problem Solving (TRIZ) Principles, American Journal of Applied Sciences, Vol (7), No (6).pp.851-872.
- 27- Janie, S. (2013). Elie Saab, Assouline: London.
- 28- Jiang, J. (2013). School of Mechanical and Power Engineering, Harbin University of Science and Technology Harbin, China.
- 29- Malone, M., Allen, S. and Katz, J., Mccauley, M. and Watson, H. (2018). Irritable Bowel Syndrome, A review and update, Scientific Literature Gastroenterology, 1(2), p1-9.
- 30- Manyung, S. (2010). Elements of Design Effected in the art univeity, Deparment of Art History, Nottingham university, London.
- 31- Muhammad, M. A. (2006). Obesity, its treatment and ways to prevent it, International Publisher House, Riyadh.
- 32- Muhammad, N. S., Al-Zaftawi, H. N. and Abboud, D. M. (2003). Modern techniques in preparing the mannequin for shaping, World of Books, Cairo.
- 33- Naoush, S. A. (2011). Health guide for women after thirty, Dar Al Khaleej for Publishing and Distribution, Amman.
- 34- Nour, W. K. and Al-Dujaili, A. N. (2008). The effect of high prolactin on the level of some sexual hormones and fertility in women in Najaf Governorate, College of Education for Girls, University of Kufa, Iraq.
- 35- Qannouna, S. A. (2023). Taking advantage of Asiri motifs to create contemporary designs for children's clothing, The world of education, 2(79), The Arab Foundation for Scientific Consultation and Human Resources Development.
- 36- Rabah, Z. O. (2018). Employing the features of the Sumerian civilization in women's evening fashion designs, international design magazine, 8(2), Scientific Society of Designers, Cairo.
- 37- Radiona, S. and Nurbaity, M. (2019). Development of Draping Learning Media Through Dress Form in Determining the Pear Body Shape Compensation Ratio on Custom Skirts, Fashion Design Studies Program, 3rd Ictvet, Jakarta, Indonesia.
- 38- Samaha, W. M. (2021). Visual illusion and the aesthetic dimensions of geometric lines and its use when designing women's fashion to hide physical defects, Journal of Architecture, Arts and Humanities, (26). Arab Society for Islamic Civilization and Arts, Cairo.
- 39- Shehata, M. A. (2022). The effectiveness of TRIZ theory strategies in developing mathematical connections among primary school students, College of Education Journal, 10(30), Faculty of Education, Al-Arish University, Cairo.
- 40- Taima, N. M. and Afifi, G. S. (2018). Design elements and their use in designing home clothing to treat body defects,

International Design Magazine, 8(1), Scientific Society of Designers, Cairo.

- 41- Zaghoul, S. A. and Muhammad, R. H. (2015). Applied research in the field of fashion design, Al Rushd Library, Riyadh.
- 42- <https://www.eliesaab.com> (5 April 2020)
- 43- <https://www.youm7.com/story/> (20 March 2020)
- 44- <https://theproteinprincess.com/tag/ab-separation> (8 Marh 2020)
- 45- <https://www.mosoah.com/beauty-and-fitness/weight-loss/get-rid-of-the-stumps-forever> (13 December 2019)
- 46- <https://www.webteb.com/articles> (5 April 2020)
- 47- <https://www.webteb.com/multimedia/slideshows> (6 April 2020)
- 48- <https://nutritionqa.com/muscle-separation> (7 June 2020)
- 49- <https://www.spectrumhealth.org> (4 October 2021)
- 50- <https://www.alroeya.com> (3 August 2021)
- 51- <https://bestbuybeautysupplymiami.com> (10 June 2020)
- 52- <https://www.valentino.com> (17 October 2021)
- 53- <http://www.zuhairmurad.com/en/home> (15 August 2021)
- 54- <http://www.dolcegabana.com> (1 June 2020)

Paper History :

Paper received August 26, 2023, Accepted October 18, 2023, Published on line January 1, 2024