Information and ergonomics in graphic presentation of warnings in toy packaging.

Patrícia Nicácio 1, Raimundo Diniz 2, Carla Spinillo 3

Federal University of Maranhao, Campus Universitário do Bacanga – Centro de Ciências Exatas e Tecnologia (CCET) – Bloco 06, Sala 216 – CEP 65080-580. São Luís – MA.

¹ patriciaregia@gmail.com 1, ²rl.diniz@ufma.br 2, ³ cgspin@gmail.com

Keywords: Ergonomics, Warnings, Toys packaging

1 Context

Toy industry is growing every year in Brazil and all over the world, according to the Brazilian Association of Toy Manufacturers (ABRINQ) (2013). Technological advances and new materials are contributing to create new toys. About 8,500 toys are created by designers and 2,000 are launched on the market by manufacturers every year.

Toys packaging design should consider all primary information needed to user understand all the best way of handle and operate objects. Furthermore, information must be presented to clarify any doubts related to actions and behavior concerning to use of toys. Every information designed on toys should be aiming child safety and it friendly use. Adults are the main responsible to offer toys to children and they are the first consumer and, children are the final consumer. Then, adults need understand all information about safety of toys before purchase it.

Warnings must be designed to accomplish attract attention and provide understandable information needed to improve the decision making regarding packaging compliance. Therefore, warning design should consider requirements concerning to information about hazards, consequences, and instructions (LAUGHERY; WOGALTER, 2006). According to Ayres et al. (1989), warning must have two main objectives in order to ensure the safety of individuals: the first would be to communicate information about a potential risk, or a possible negative consequences that may occur to something or someone as a result or failure of a given action; the second would be to reduce unsafe behavior that may occur if there is not the presence of warnings. Thus, the packaging design is important to potentially alert people to latent hazards.

This paper describes a study about graphic presentation of warnings in toys packaging traded in São Luís City (MA).

2 Method

It was analyzed a sample composed by 612 warnings collected on toys packaging – represented by verbal modes – all categorized in 7 (seven) kinds of toys. It was considered a model of Variables of the Graphic Presentation proposed by Mijksenaar (1997) to analyze the sample mentioned. For this research, was selected and analyzed a sample of toys in stores of major franchises and great shopping stores in São Luís city (MA), Brazil. Also, it was considered variables such as color, size of words, boxes, symbols, texts and, alignment.

3 Results

In general, warnings variables do not reach 50% of conformity according to literature. The main problems of conformity were related to color used to warning text, word or boxes. That situation can configure out particularly problems concerning to attention. Furthermore, the position of textual and pictorial warning was well different and most of times positioned out of visual zones.

Other findings were related to: use of same size of warning words; emphatic elements were not used (e.g., boxes); how the warning messages were transmitted to the users; use of more than one element (redundancy) to transmit the same meaning, such as use of words, pictograms and color at the same time and; legibility and readability problems.

The results showed there was a higher incidence of use of black outline in the texts of the warnings representing 38.1%. The boxes in white with no outline appeared in 27.5% of the packaging. The analysis showed a tendency to use only black outline, but there was the use of a background color that has the function to highlight information from other visual elements of the package. For this reason, the leaked delimitation of warning the area impairs the transmission of information to the consumer.

4 Conclusions

Results show that the verbal warnings are not according to literature. Also, in 9 (nine) of 12 (twelve) variables analyzed, most of warnings had design problems that can bring damage to children.

All textual warnings should observe the forms of graphical presentation and characteristics: the type size, weight of the type, the color, upper and lowercase, alignment, use of boxes etc. The proper use of graphic aspects ensure greater

legibility of information and the consequent increase in the ability to understand the safety information and make the best decision.

5 References

- 1. ABRINQ. **Brinquedos:** o desenvolvimento do setor estatísticas 2012. Disponível em: http://www.abrinq.com.br/>. Acesso em: 12 ago. 2013.
- 2. AYRES, T. et al. What is a warning and when will it work? In: HFS Annual Meeting, 33th, 1989, Santa Monica. **Proceedings...** Santa Monica: Human Factors Society, 1989, p. 426-430.

WOGALTER, M.; LAUGHERY, K. Warnings. In: KARWOWSKI, W. (Ed.). *International Encyclopedia of Ergonomics and Human Factor*, *2. ed.* London: Taylor and Francis. 2006. p. 1367-1373.

6 Acknowledgments

Authors would like to acknowledge to FAPEMA agencie.