

博士学位論文 審査結果の要旨

芝浦工業大学大学院 理工学研究科 博士（後期）課程

博士学位論文審査委員会

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論文題目	Perceptions of Colored Pictograms for Communication in Factory Emergencies
<p>〔論文審査の要旨〕 2019年2月11日17時より博士論文の最終審査（公聴会）を行い、60分の発表の後、質疑応答を行い、次いで博士論文審査委員全員による審議を行った。博士学位論文は、汎用ピクトグラムの検証や先行研究に基づき、申請者による博士論文はピクトグラムと色の認識に関する研究とその結果で、分析結果とそれに基づく安全教育への考察が審査委員から高く評価された。投票の結果、全委員一致で合格とした。以下は審査された博士論文の要旨である。</p> <p>This study examined the effects of cultural and educational background factors on the comprehension of colored pictograms for emergency situations in manufacturing contexts by focusing actions in factories. In this study, colored pictograms in different colors for such manufacturing actions as “push”, “step”, and “turn” were designed. The colors of the pictograms were white, black, red, yellow, green, blue, and pink, which are commonly used for ISO, JIS and other signs for emergency situations. The pictograms were presented to 178 Thai and 80 Japanese university students in a questionnaire survey to identify their perceptions toward the importance of the seven differently colored pictograms. The statistical analysis of the survey showed a significant difference between the two groups for colors often used in ISO and JIS emergency signs, and suggested that the difference was due to a lack of safety training for Thai students. The same pictograms were also presented to factory workers with different cultural and educational backgrounds by using the same survey questionnaire. In the survey, 138 workers (40 Thai, 40 Burmese and 40 Cambodian subjects) responded to the questionnaire in which instructions were expressed in their native languages. The statistical analysis of survey results showed that a difference between groups with different educational levels was statistically significant for red, yellow and green pictograms. The results from the factory workers suggest that workers should be explicitly instructed about the links between safety functions and pictogram colors in their job training to maintain safety at a factory. The results of both surveys indicate that the perception of colored pictograms for emergency situations can be affected more by training / education than by a cultural difference, which is often pointed out as an important factor of color perception.</p>	