



Reflective Light Sport Suit

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1 Contextual review and concept:

Many pedestrians are injured by automobiles as a result of drivers' visual limitation (Wood, Lacherez, & Tyrrell, 2014; Pour-Rouholamin, & Zhou, 2016). Pedestrians at dawn and night are more at risk than in full sunlight. Researcher suggested that pedestrians' apparel and poor visibility is likely to be a major contribution to these accidents (Tyrrell, Wood, Owens, Whetsel, & Stafford, 2016; Pour-Rouholamin, & Zhou, 2016). This sport outfit is designed using retroreflective material for persons jogging at night or before dawn.

2 Aesthetic properties and visual impact

An inventive reflective textile was used to create an active suit to show flashes of light or seen after flash (Chiu, Tsai, Chen, He, Lin, & Yang, 2017). A 100% polyester 4-way interlock coated reflective glass beads and plain interlock fabric was used to create this project. These millions of tiny, highly reflective glass beads, provide the necessary luminance for this jacket and pants activewear suit.





3 Process, technique, and execution

This project includes a full-length sleeve sports jacket and long jogger pants with reflective fabric to create V effects on joining. A 100% polyester black interlock fabric was used to create upper portion of the pants. The black polyester interlock fabric was coated with reflective beads on the surface. The innovative techniques used to create the reflective interlock provide 4-way strength and a visual aesthetic. This non-traditional application could be used by designers and educators for design inspiration.

TECHNIQUES:

To create the Reflective Sports Suit, a flat patternmaking was used. This unique sports suit includes a front opening zipper hip length jacket and a pair of pants in reflective fabric at leg areas with V effect at joints area. The V effect of reflective light jogging bottom can be detected than a full piece in human body movement (Wood, Tyrrell, Marszalek, Lacherez, & Carberry, 2013). Muslin was used for pattern and fitting adjustments. After fit and modifications had been achieved, the cut of V effects was strategically placed on the pants to achieve a variety of visual manipulations. This suit, a long sleeve reflective jacket and a pair of full-length pants with V effects reflective light, were created by using a flat pattern technique. A 100% polyester interlock coated with Nano reflective glass beads created the reflective light that was illuminated with human body movement.

An experimental photo shoot to exam flash effect on photos with 10, 20, and 30-Ft distance. All photo shooting used a tri-pod to make sure distances were measured. The results found that brightness is not different by eyes or photos within 30ft distance.

			
<p>In the Regular class room light without flash in 30ft</p>	<p>In the Dark room with flash in 30ft</p>	<p>In the Regular class room light without flash in 10 ft</p>	<p>In the Dark room with flash in flat setting in 10 ft</p>

4 Cohesion

The purpose of this garment is to bring outdoor safety issues in the dark environment such as jogging or any sport activities in the early morning and late evening when visibility is low. This outfit can be visible in darker environments when exposed to flashes of light to circumvent accidents.

5 Design contribution and innovation

The reflective properties in this outfit provide better visuality under a dark environment. The garment exposed under flash can be seen as far as 50 M. This suit is designed for any adult who exercises in lower light conditions. The researcher has addressed a problem of pedestrian accidents by automobiles caused by poor visibility and lack of reflective light in the dark (Wood, Lacherez, & Tyrrell, 2014).

Reference:

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