

User-centered design and niche-market development: Engaging Students in the design and merchandising

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Introduction: Understanding customer's needs is a prerequisite for effective design and market development in fashion industry. In common fashion curriculum, future fashion designers and merchandisers acquire market research methods focused on the target market's geographical and demographical characteristics as a means to identify customer's needs. However, the conventional market studies overlook customer's unconscious needs since customers often do not recognize what they want or even can expect from apparel product. In order to identify customer's conscious and latent needs, a relatively newer user-centered approach called empathic design employs close observation and systematic analysis of customer's experiences in their own environments (Leonard & Rayport, 1997). This approach's unique properties including close observation and deep empathy for customers' experiences has great potential to provide fashion students opportunities to practice for user-centered design and niche-market development. Thus the purpose of this study is to apply the empathic design approaches, serving as a pedagogical method, into practicing critical thinking process to develop adaptive wear and identify potential niche-market for the customers in special needs.

Project Activities: During the Fall 2016 semester, two faculty members in the Department of Fashion Design and Retailing advised two honors program students, one from design concentration and the other from merchandising concentration. Students chose design and market development for people with Parkinson's disease (PD) as their thesis projects. The design and merchandising students worked with their advisors to obtain the approval of Institutional Review Board for the research projects at the beginning of the semester. During the semester, instructors guided students to project a qualitative study for developing product prototype and a quantitative study to test the niche-market business model.

Student researchers closely observed and interviewed 14 patients in September 2016 with support of the Chapter in Ashland of the American Parkinson's Disease Association. This in-depth interview was recorded and videotaped. Students also conducted an online survey of 14 patients. In the online survey and in-depth interview, students asked their physical obstacles on daily bases and their expectations towards garments.

While developing the prototypes of the garments, the student researchers conducted a further study through applying the Kotler (2003)'s five key characters in niche-market to market their products. Student researchers developed a questionnaire based on the Market planning framework (Parrish, Cassill, & Oxenham, 2006) including 1. How much are customers willing to pay for the products; 2. Whether this market is going to be attracted by other competitors? 3. Whether this market will gain certain economies through this specialization; 4. What are the size, profit, and potential growth of this niche-market; and 5. What marketing and retailing strategies

can be applied to promote the products? The research team then conducted a second round study using an on-line survey system. The survey was posted under the American Parkinson's Disease Association's Facebook page. Data were converted to an excel file for data coding and data analysis.

Learning outcomes: This project provided design and merchandising students a realistic and cohesive opportunity to experience whole procedures for the collaborative product development to serve a niche-market: people with PD. By seeking aesthetically and functionally successful designs targeted for people in special needs, students from both disciplines came to deeply empathize customers to identify physical challenges and provide creative design solutions to meet conscious as well as unconscious needs. The uniqueness of this project is that students were able to simulating the whole niche-market development process including design, niche market research, marketing, and promotion. Students experienced the whole fashion business process to find out design components and customer needs through the qualitative and quantitative research. In addition, closely collaborating with potential customers in the research process made the students aware that developing featured products for niche-market do not guarantee customers' perceived need. Another important layer which both design and merchandising team should work on is to convert the latent need into an actual want.

Future direction: Students designed and developed a featured product lines for user-centered niche market. In addition, students developed designs for participants in special needs, industry level of garments, and retail strategies for promoting the collections. For future project development, students can 1. Develop various design prototype designs based on different levels of physical constrains; 2. Develop a real marketing campaign to communicate with consumers to test whether the products can be converted to an actual want; 3. Work with angel investors at the end of the project to evaluate the potential economies of this business idea and simulate their business models.

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