A Design Study on the Developing In-page Data-based Persona for Web Service

李, 志顯

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Name: Ji Hyun Lee

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Abstract of Dissertation

The goal-oriented design process based on a persona is a typical process in user experience design and persona is a widely used user modeling method in the user experience design field. Persona has traditionally focused on generating rich user backgrounds, contexts, and scenarios based on qualitative data from observation and in-depth user interviews.

However, there have been various discussions on the limitations of persona modeling. Typical disadvantages of traditional personas include the cost of user research required for modeling, time problems, reliance on qualitative data such as over-observation and interviewing, and possibility of excessive intervention by the researcher in constructing a scenario. Companies that accept lean UX processes have also attempted to introduce a simple persona such as a proto-persona that quickly fills in a specific template based on existing assumptions rather than vast amounts of data. On the other hand, as the convenience of data utilization increases with the development of data analysis software, studies on the introduction of data-driven personas are also increasing.

The research methods of this study are based on literature review, building in-page analytics software features for research, in-page data-based persona framework design, a case study and expert review of persona modeling. First, this study investigated the features and limitations of persona that are traditionally used in the UX design field for the purpose of literature review. Then, this study analyzed the existing research on the possibility, application range, and modeling method of a data–based persona.

Then, this study looked into the data analysis tool for extracting data from web services and analyzed the data types of Google Analytics, which are the most widely used in the Internet business market. On the other hand, this study analyzed the data types that can be obtained with the newly developed in-page visual analytics software, Beusable. Moreover, this study developed clustering functions for in-page data-based persona modeling and suggested various quantitative data utilization methods of Beusable solution.

Based on the quantitative data of web analytics and in-page analytics, we defined the elements system for in-page data-based persona modeling and designed the template. Then, a case study subject was selected and in-page data-based persona modeling was conducted. I interviewed the CEO of the case study web site and modeled the new and returning user persona based on elements and template. Persona modeling is designed to show characteristics of the difference between new visitor and returning user persona model.

Finally, in-page data-based personas were evaluated by expert interview. The experts consisted of 20 professionals with experience in web site planning, design and development. Expert evaluations were conducted in a 1:1 interview format that elicited the usefulness and improvement of the persona model. Interview results were analyzed by using thematic analysis method. In-page data-based personas for new and returning visitors were found to be useful in identifying user behavior patterns, pain points, UI design problems and user research, marketing opportunities for web services.