

Methodology This study adheres to established, mainstream methods for developing and validating psychometric scales. The research methodology is founded on a working definition of the construct; in this instance, perceived service quality refers to users' impressions of pertinent chatbot service aspects.

Study 1: Feature Description The characteristics used by technology vendors to characterize the impact of chatbots on performance and service quality are identified in Study 1. Features that outline the service quality and performance impact of chatbots are frequently found on websites, white papers, and external publications from technology providers.

Study 2: Expert Interviews The purpose of Study 1 is to examine vendors' present or future impressions of chatbots; however, the results do not show how these descriptions align with subject matter experts' opinions. Consequently, we conducted semi-structured, in-depth interviews with eight executives who oversee chatbot adoption projects in Swiss, German, and Austrian companies. Ultimately, we were left with a representative sample of eight distinct industries: automobile, manufacturing, banking, insurance, retail, consulting, pharmaceutical, and utilities. Describe the pertinent measures (features) for service quality performance in real-world chatbot projects was the primary goal of the interviews. Following the results' interpretation, we expanded the pool to include 16 more features for service quality (a total of 45) and 8 features for performance (a total of 25).

Study 3: Supplementation of Features Compared to study 2, study 3 has a bigger sample size. An online survey was completed by 143 participants in an international professional education programme. In a well-designed survey that included an open-ended questionnaire, the education program's respondents (average age: 33.4; male: 54%; female: 46%) described pertinent elements for service quality and performance from a user perspective. A total of 67 features for service quality and 11 features for performance were gathered in Study 3.

Study 4: Item Reduction A total of 103 characteristics were found in studies 1–3. As a result, we reduced the initial items in multiple steps. First, the procedure aims to remove words that aren't commonly used. To do this, two academics assessed each word's frequency in common language (1 = extremely rarely, 7 = very frequently), and two academics assessed whether or not chatbot traits were adequate (1 = not qualified at all, 7 = very qualified). Expert judges then assessed the content and face validity. Based on the idea of virtual assistants, two executives from technology companies evaluated the appropriateness of the item. A screening mechanism was supplied by the mean scores for each stage (i.e., to describe a chatbot, assess customer service performance, and determine whether the step was acceptable).

Study 5: Identification of Service Quality Dimensions By using calibration processes, Study 5 finds the possible factor structure of service performance and quality in a reflective measurement model. A total of 253 participants from professional education programmers answered the survey "Chatbots in Customer Service" (average age: 35.6; male: 58%; female: 42%). The following questions guided the respondents' descriptions of their experiences using the six service chatbots they tested out: "It's interested in your general experience while using the different chatbots." What degree do the following items align with your expectations for the level of service you will receive from the chatbots? Seven-point Likert-type scales (1 = does not apply, 7 = absolutely applies) were used to evaluate the items. By using principal component analysis (PCA) and oblimin rotation, one can examine dimensionality and identify items that should be deleted. Several widely used criteria indicated that a four-factor solution was the best option.

Study 6: Model Evaluation

With the four determined service dimensions (based on research 5) and typical performance dimensions (based on the features outlined in study 4), study 6 seeks to create and test a causal model for customer services. Using information obtained from a German B2B manufacturer's customer service division, the study tested its hypotheses. Customers of this manufacturer have previously used a variety of avenues to receive services.