Validating competency frameworks using an online Delphi survey: Lessons learned

Sofie Van Ostaeyen, Helena Demey, Mieke Embo, Tammy Schellens, Martin Valcke

Abstract

Competency frameworks are the backbone of competency-based education. Much research has been done on the outcomes of competency frameworks, but the development process remains underexposed. There is a need for improved guidelines related to competency framework development. Therefore, the aim of this study was to uncover the advantages and challenges of a frequently used method: the validation of a competency framework by stakeholders using an online Delphi survey. Semi-structured interviews were conducted with three researchers who used an online Delphi survey to validate competency frameworks in different contexts: specialist medicine, general practice, and general healthcare professions. The interviews were transcribed verbatim and analysed in NVIVO using inductive thematic analysis. Six main advantages were identified including, among others, the anonymity, and the absence of time and geographical constraints. The challenges the researchers encountered while conducting their online Delphi studies were categorized into 3 themes: recruiting participants, informing participants and using an online survey format. Tips are provided to deal with these challenges. In this way, the researchers hope to support other developers in determining whether an online Delphi survey is an appropriate method for their competency framework development process.

Keywords

Extended summary

Theoretical background

During the last decades, competency-based education has become widespread adopted within healthcare education (Frank et al., 2017). Competency-based education is an outcome-based educational approach which is organized around a framework of competencies. As such, it provides a link between professional practice, education, training and assessment. Research mainly focuses on the framework outcomes and to a lesser extent on the framework development process (Batt et al., 2020). There is a need for improved guidelines on how to determine the most appropriate development method and how to deal with the challenges related to competency framework development (Batt et al., 2020). A wide variety of development methods exists. This study focuses on a frequently used method: the validation of a competency framework by stakeholders using an online Delphi survey. This consensus method is based on an iterative process in which experts are consulted on a particular theme. During different rounds, quantitative and qualitative data are collected using online surveys. This process is repeated until the best possible consensus is reached or a predetermined number of rounds are completed (Humphrey-Murto et al., 2017).

Aim

By thoroughly examining the online Delphi survey method, this study aims to uncover its advantages and challenges. Moreover, tips will be provided to deal with these challenges.

Method

During February and March 2020, three individual semi-structured interviews were organised with researchers who conducted online Delphi studies to validate competency frameworks in different contexts: specialist medicine (paediatrics), general practice, and general healthcare professions (midwives, audiologists, dental hygienists, nurses, occupational therapists, podiatrists and speech therapists). They all used an online survey to present a competency framework to participants in order to attain consensus about the proposed competencies. The interviews were audio-recorded and transcribed verbatim. The data were analysed in NVIVO using inductive thematic analysis . To ensure reliability, two researchers collaborated intensively to identify and refine the emerging codes and themes.

Results

Six main advantages of the online Delphi survey were identified: (1) the opportunity for all participants to express their opinion, (2) the anonymity making it easier for participants to express their opinion, the absence of (3) time and (4) geographical constraints, (5) the ease with which reminders can be send to participants, and (6) the digital format in which the data are captured. The challenges the researchers encountered while conducting their online Delphi studies were categorized into 3 themes. The first theme included challenges related to the recruitment of participants. The researchers mentioned it was difficult to gather participants. Particularly due to privacy regulations, it was hard to invite participants personally. Moreover, the researchers experienced some bias among the participants: mainly professionals with an interest in education participated in the studies. The second theme contained issues about informing participants. The purpose of the study was not always clear to the participants, which led to unclear or irrelevant comments on the competencies. The third theme covered challenges concerning the use of an online survey format. The main challenge was the impossibility of direct interaction between the researchers and the participants, and among the participants. For each theme, the tips provided by the researchers to deal with these challenges were described.

Discussion

An online Delphi survey is a frequently used method for developing competency frameworks. However, the choice for this method must be in accordance with the rationale for development and the intended uses (Batt et al., 2020). The results report advantages as well as challenges of the use of an online Delphi survey. Moreover, tips are provided to deal with the challenges related to recruiting participants, informing participants and using an online survey format. These insights were presented visually in the form of an infographic. In this way, the researchers hope to support other developers in determining whether an online Delphi survey is an appropriate method for their competency framework development process.

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