



Stakeholders' perception of competencies of aviation graduates and its implications to curriculum design

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BACKGROUND

Outcome-based learning has been a focus of higher education institutions in Australia over the last 2 decades, with an aim to facilitate students to proactively navigate, explore and develop competencies required by the industry and society. Such an approach highlights the requirement for student-centred learning while at the same time poses challenges to degree programme providers to ascertain the set of desired generic- and industry-specific competencies, thus, designing a programme that is able to support students to achieve these competencies.

With no professional body in Australia that currently accredits aviation programmes offered in higher education institutions, these institutions have taken their individual initiatives in the programme design, resulting in diversity in terms of course structure and curriculum. Yet, the paramount question remains to be what constitutes the generic- and aviation industry-specific set of competencies and how to determine whether the programmes are capable of facilitating the students to develop any desired competencies.

PURPOSE

This research project, undertaken jointly by Swinburne University of Technology, Griffith University and University of South Australia, will ascertain stakeholders' perception of the set of competencies required for aviation graduates at the end of their higher education, leading to the establishment of a framework to determine the set of competencies, which are consistent with the requirements set by the Australian Qualifications Framework Council (AQF) as well as the Civil Aviation Safety Authority (CASA).

DESIGN/METHOD

The research project will involve a review of literature and an investigation of competencies required in the views of stakeholders through online survey and in-depth structured interviews. The literature review will facilitate the researchers to develop a comprehensive overview as to what research has been conducted in other disciplines such as engineering, business and clinical studies, and what competencies have been identified and accepted. It will also help the project team develop a list of competency statements that will inform the online survey for data collection for conducting this project.

The views of stakeholders, which include but are not limited to industry regulators, policy-makers, aviation-related organisations, flight training organisations, aviation academia, and current student representatives, will be gathered through the distribution of the online survey questionnaire and conduct of structured interviews. The questionnaire will be composed of two elements, e.g. descriptive variables collecting demographical information and exploratory variables gathering individual's perception and understanding of the required competencies. Demographic data will include participants' age range, gender, educational qualifications, working experience, occupation and level of position held in the organisation. The information collated will be used to understand and determine if and to what extent these personal traits will have an impact on their views of the competencies and the development of the competencies. The exploratory data will be gathered through the choice of competency statement which will be grouped into themes as inferred and accepted in other disciplines. They will be computerised and analysed to establish what are the widely accepted competencies and why the identified competencies are considered essential and necessary.

The questionnaire will, first of all, be piloted and evaluated within a selected group composed of academia, representatives of the respective Industry Advisory Committee for the Aviation Programmes of the above three universities, and the current aviation students of the respective university before it is officially distributed and made available through a secured online instrument, e.g. SurveyMonkey, for the targeted recipients, who will be aviation alumni of the three universities, academia who design and deliver the aviation curriculum, and current aviation students of the above three universities. Invitation emails together with an information pack containing a consent form and explanation of the purpose of the research, procedures and timeline of the research project will be sent out respectively from each university's aviation alumni database. Follow-up emails will be sent out as reminders to ensure the response rate at a confident level.

Three focus-group structured interviews, with each involving up to 20 participants, will be convened respectively in Swinburne, Griffith and UniSA. The 20 participants in each of the focus-group interview will be selected from current aviation students, academia, respective nominated industry personnel, and representatives of alumni of each university. The interviews will be used to cross-examine and subrogate the information gathered from online survey so as to ascertain that the findings are a true and accurate reflection of the views of the participants. An information pack will be sent out to invitees containing a consent form and explanation of the purpose of the research project, procedures and timeline of the research project. Follow-up emails will be sent out as reminders to ensure the attendance of the focus-group discussions. The data will be analysed to explain and explore the rationale of the answers to the online survey, to clarify any queries that the researchers might have developed in processing the quantitative data, and to gather additional thinking about the competencies.

INTERIM FINDINGS

The literature review will hopefully lead to the development of a list of set of competency statements identified and accepted by other disciplines, taking into account the requirements of Australian regulators including AQF and CASA. The list of competency statements will be piloted by the researchers and amendments will be made where necessary to ensure they are appropriate for online survey for data collection.

FURTHER RESEARCH

The researchers will action accordingly and start data collection and analysis in due course. This would include conducting literature review; preparing the questionnaires to be uploaded to a secured online survey instrument; preparing the list of questions for group discussions and in-depth interviews; preparing an information pack containing the background information of the research, list of questions and consent form to be distributed to the identified participants; analysing the data collected, drafting the report and presenting the findings.

CONCLUSIONS & CHALLENGES

The intended outcome of the research will be a themed set of desired generic- and aviation industry-specific competencies that aviation graduates should possess as a result of their tertiary education. The challenge we need to address is to identify the set of themes.

This is considered the biggest challenge for the research team in that there has been no such research in the aviation discipline, although the preliminary literature review has revealed that some studies have been done in other disciplines such as medicine and business studies. Another justification is that the aviation discipline covers both flight programmes and aviation management programmes, whose graduates will be required to possess different set of competencies despite some overlapping.

KEYWORDS

Competencies, aviation, curriculum design, learning experience and outcome
