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Cleared for take-off: Assessing the core competencies and behaviours of pilots

Nora Nienhaus explains a new research study which identifies the competencies and behaviours that airline recruiters should use to assess captains, first officers and cadets.

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Assessing the competencies and behaviours of pilots

How airlines can predict success when recruiting flight crew

cut-e has undertaken a pioneering research study to identify the specific competencies and behaviours that airline captains, first officers and cadets need to successfully undertake their jobs.

Here, Nora Nienhaus – Research Consultant and co-author of the study – explains why it was undertaken, the main findings and the benefits that these insights offer for airline recruiters.

What were you aiming to achieve with this study?

We work with a number of airline clients and we wanted to help them to better understand the core competencies and behaviours of captains, first officers and cadets, so they can predict which of their applicants will be successful in the role.

Two contrasting examples highlight why this is important. In 2009, US pilot Chesley Sullenberger landed his stricken plane on the Hudson River, saving the lives of all passengers and crew. In 2015, Andreas Lubitz was the co-pilot who deliberately crashed a plane into a mountain in the French Alps, killing everyone onboard. The challenge for those who recruit pilots is clearly to choose a Sullenberger, not a Lubitz, from the pool of potential applicants.

Our study involved a comprehensive literature review, job analysis findings, empirical evidence gathering, involving 27,000 flight team members across 12 different airlines, and global validation research. From this, we've created a 'profile' of the job-related competencies and behaviours required in every flight crew role. Airline recruiters can select candidates against this profile when hiring cadets, first officers and captains.

What competencies and behaviours are important?

We identified the specific operational, personal interaction and motivational competencies that are relevant for each role. These include safety orientation; situational awareness; decision-making; the ability to detect and manage errors; the ability to manage the tasks required before, during and after each flight; collecting, analysing and evaluating information; customer and commercial orientation; teamwork; interpersonal skills; the ability to give clear guidelines; resilience; self discipline; self management; dedication; drive and an interest in self-development.

However, there are subtle differences in the competencies required at each level. For example, the ability for individuals to plan and organise themselves is an important competency for cadets but it becomes less relevant as individuals gain more experience and seniority.

Importantly, as individuals progress in their careers, they'll need to complete different tasks before, during and after each flight. They'll take on additional responsibilities as they progress, such as leading the crew, delegating tasks and taking charge in emergency situations. This means that, although the core competencies are broadly similar for each role, different 'behaviours' will be required of captains, first officers and cadets. For example, a captain's role will involve leading the team and resolving any conflict, whereas a cadet's role will involve respecting the rules and contributing to the team's success.

How should recruiters assess for these competencies?

When recruiting cadets, first officers or captains, airlines will of course need to check whether candidates have the technical capabilities required for the role. Ability tests which measure aspects such as

inductive and deductive reasoning, spatial orientation and precision can help with this. These tests will show whether a candidate is 'capable' of performing well in a role. However it's also important to assess the competencies and behavioural preferences of candidates, to ensure they'll be able to master the tasks and challenges they'll face.

This can be achieved using a personality questionnaire that assesses work-related behaviour and a second questionnaire that measures safety-related behaviour. These assessments will reveal 'how' a candidate is likely to perform in the role. Using the findings of our literature research and our empirical studies, we've created a 'behavioural fit report' for each candidate, showing a profile of how their results compare against the required competencies. We found that when a candidate's personality profile is combined with their simulator results and their flying experience prior to employment, the job success of pilots can be predicted with 79.3% accuracy.

The behavioural fit report can also flag up personal or psychological aspects that should be explored further in an interview. For example, the personality questionnaire may reveal that an individual has a tendency to make poor decisions under stress. An interviewer may wish to probe this finding, or to find out how the candidate deals with their emotions, to determine whether the candidate has the competencies that are required in order to deal with all the challenges a pilot might face before, during and after flight.

This feature of the report is not designed to replace a clinical interview. It simply makes recruiters aware of some of the potential risks that may apply for each candidate. Pilots will face the challenge of working shifts, and being away from home frequently, which can affect their work-life balance and be socially disruptive. Andreas Lubitz had been declared 'unfit to work', after being treated for depression and suicidal tendencies, but he withheld this information from his employer. Airlines therefore need to undertake regular psychological evaluations of their current and potential flight staff, to check on their mental health and wellbeing.

What are the benefits of recruiting flight crew in this way?

Assessing candidates against a behavioural fit profile of the required competencies will ultimately enable airlines to predict which individuals will be able to safely and successfully fulfil the roles of captains, first officers and cadets. Doing this early on in the selection process will mean that only suitable candidates will progress to the later and more expensive stages. This reduces the number of unsuitable candidates who attend assessment centres, interviews and simulator trials.

Another benefit is that the data gained from any assessments undertaken as part of the recruitment process can also be used to create a personal learning plan to develop the successful candidates, as it will reveal their strengths and limitations.

Airlines have an ongoing need to recruit skilled pilots who can not only navigate and fly their aircraft but who are also committed to the safety of their passengers and crew, and passionate about delivering world-class customer service. By gaining a greater insight into the suitability of each applicant, recruiters can make more informed selection decisions that will achieve these objectives.

A white paper based on the study, called *The predictive power of assessment for pilot selection*, can be freely downloaded from http://www.cut-e.com/solutions/assessing-for-the-aviation-sector

Founded in 2002, *cut-e* is a world leader in the design and implementation of innovative online tests, questionnaires and gamified assessments for attraction, recruitment, selection and development. We help employers to identify which candidates have the right capabilities, potential and cultural fit to benefit their business. We undertake 12 million assessments each year in over 70 countries and 40 languages.