An Interactive Competency Approach to Career Exploration and IDP Implementation

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Background

The paucity of academic positions has resulted in increasing numbers of PhD graduates from a wide spectrum of disciplines pursuing careers outside of traditional academia. Scientific and professional societies, academic institutions, advocacy groups, and for-profit organizations have designed and implemented robust initiatives to alert and expose PhD trainees to a variety of non-academic career paths available to them. Many of these initiatives have focused on the use of an Individual Development Plan (IDP) as a tool that drives and supports career exploration. In general, IDPs should be reflective instruments that allow trainees to assess their interests, values, motivations, and strengths and weaknesses. Development of the IDP, with the assistance of mentors, is a part of an iterative Career Decision-Making Cycle through which trainees improve their skills and refine their selection. Our own experience was to begin to identify and develop the competencies that facilitate finding employment in a fulfilling career.

It is estimated that only ~1 in 6 Biomedical PhD graduates (~16%) will attain tenure-track academic positions in the US.

Needs Assessment

IDPs help trainees focus on skills, knowledge, and abilities (SKAs) needed for career success. They generally consist of iterative cycles of self-assessment, career exploration, goal setting, and plan implementation and self-assessment. However, successful career progression requires the development of competencies— the effective use of knowledge, and minimal level of skills performance that result in securing a job, improving abilities, and advancing in a chosen career. In addition, competencies vary among careers; for example, a career in science policy requires knowledge integration across multiple fields, while a career in R&D at a biotechnology company requires focused knowledge and highly defined skills. It would be optimal for graduate students and postdoctoral scholars to identify early in their training not just SKAs, but if efficiently utilize IDPs to help them understand the required competencies and take steps to achieve them.

Career Decision-Making Cycle

1. Trainees complete an online IDP

2. Generate SKA Fingerprint

3. Compare with Panelists' Fingertips

4. Complete Worksheets

5. Reveal Panelists' Identities

Career Decision-Making Cycle

Prior to the career forum, trainees completed an abbreviated online survey to assess their SKAs, interests and values (modified, with permission, from myIDPsciencecareers.org).

We developed a process aimed to promote (a) active reflection of trainees' own current SKAs, interests and values; (b) thorough exploration of potentially compatible current and future career choices; and (c) realistic goal setting. The process culminated in a two-day career forum that incorporated an "element of surprise" to increase trainee engagement.

Trainees utilized their worksheets to identify which panels (identified only by letter A – F) best match their SKAs, interests and values and set realistic goals.

The following day, identities of the panelists were revealed, and trainees attended interactive sessions with them. Trainees utilized their worksheets to set realistic goals and progress measures, based on their interactions with the panelists.

Our Approach

3. Compare with Panelists' Fingertips

4. Complete Worksheets

5. Reveal Panelists' Identities

Conclusions and Future Steps

Conclusions:

• Trainees were highly engaged in using our IDP approach to compare their SKAs with those of accomplished scientists, which enhanced in building competencies for career exploration.
• Overall, our results strongly suggest that this approach had a positive impact on students’ attitudes toward their career preparation and decreased their anxiety.
• Particular advantage of our approach to IDP implementation include:
  - iterative cycles of self-assessment
  - visualization of SKAs that permits observation of their evolution over a continuum
  - efficient comparison of SKAs between peers or with professional models across a diverse range of fields
  - design of a "road map" for future career exploration and eventual career satisfaction

Future Steps:

• Identification of "Fingertip SKAs" for different professions or careers, by administering our IDP to a large set of alumni.
• Identification of areas of variation within each career, due to individual roles and approaches.

References