

# Design Thinking and Career Development: A Comparative Study

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## Abstract

This study conceives career development as a design process and not as a planning activity. An uncertain and fast-changing professional environment requires adaptation and training in a proper mindset. Since there is no such thing as “expertise” in life, Design methodologies and principles may be helpful for students to develop self-awareness and guidance. This study presents a comparative approach based on Beckman and Barry’s (2007) learning framework of the two main career development methodologies for students based on Design Thinking: “Designing Your Life and BE(A)ST” (BE Aware Student). Designing Your Life explores design thinking principles and techniques to help individuals create fulfilling and meaningful careers. BE(A)ST is an approach, process, and set of tools that assist students in designing their careers while still at university.

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## Introduction

The need to prepare students for the VUCA world has been emphasized in policy documents from the OECD and UNESCO (Hadar et al., 2020). In the current situation of ongoing, unpredictable change that is now typical in several business sectors and industries, career choice is increasingly becoming one of the essential topics for research in personal development and contemporary educational trends. It is believed that no amount of formal education in the classroom will be able to equip graduates to handle current and future workplace disruptions. Therefore, it is crucial we reconsider how we educate and prepare future graduates so that they can not only land their first job but also be flexible enough to fit into the variety of new jobs that will emerge.

As career choice affects the social, economic, and emotional well-being of individuals, it is thought to be among the most significant decisions people make in their life (Hartung, 2011). Its tight connection to the concept of employability has caused a public debate (McQuaid & Lindsay, 2005), regarding the characteristics of a “good” university or degree program. In fact, employability is a central subject that impacts how academic institutions conceive and promote themselves, how society views higher education and its institutions, how scholars educate and study, and how undergraduates create their prospective identities. As a result, higher education institutions across the globe are now working towards increasing the employability of their students. In addition, higher education institutions (HEIs) have made employability a common practice to embed employability expectations and improve student learning outcomes, particularly at the undergraduate level (Fallows & Steven, 2000).

Nonetheless, increasing the employability of their students is a difficult task for higher education institutions, as globalization and diversity in society and the workplace require graduates to acquire social and humane principles (Mtawa et al., 2021), which universities find difficult to incorporate into the curricula. In fact, universities advertise their degrees as options tied to limitedly flexible careers. These options are challenging to uphold because they require negotiating with numerous parties (teaching staff, researchers, management, and career officers) and navigating convoluted administrative procedures. As a consequence, there is an unbalanced relationship between study programs and labor market demands, which can have a detrimental impact on graduates' careers and life. Connected to wrong career choices, roughly one-third of employees claim that they are not satisfied with their careers (Eurostat, 2015). This indicates that higher education is an insufficient source for work-life preparation since graduation does not guarantee a smooth transition to employment or professional success (Schomburg & Teichler, 2007). Moreover, professional growth and the transition to the next sphere in life are influenced by various internal and external factors. According to Allen and Van der Velden (2007), the transition process has evolved from a simple notion defined as the stage between full-time schooling and full-time employment to a complicated concept defined by these precise conditions but characterized as uncertain. This makes employability a wicked problem, suitable for abductive reasoning (Peirce, 1931) and design thinking (Dorst, 2011).

This research begins by highlighting the importance of career awareness for university students analyzing and comparing the two main approaches to students' career development based on Design Thinking: Designing Your Life (DYL) by Bill Burnett and Dave Evans (2016) and Be Aware Student (BEAST) by Eric Guerci, Joanna Świątoniowska, Maria José Varadinov, and Matteo Vignoli (2022). While both approaches share the use of design thinking in career development, a user-centric approach, and are implemented as university courses, they differ in their specific focus, target audience, and unique features. BEAST is tailored specifically for students and emphasizes personalized career development during the course of study. It also considers the needs of university teaching staff, Career Offices, and university management staff. On the other hand, DYL has a more general audience and explores design thinking in the broader context of career and life development.

## Theoretical Background

With future graduates entering a world where job transitions are more common, career paths are less predictable, and employment prospects are more fluidly defined (Savickas et al., 2009), design methodologies can be applied to provide a structured framework to foster this stage of transition (Dorst, 2011). The contribution of design to modern society is becoming increasingly important, redefining its areas of action. Life Design is one of the areas of design usage that has emerged within the last years and refers to a specific type of counseling that assists individuals in defining their career as a story, narrating their personal working lives with continuity and coherence, discovering life themes, creating life meaning, building identity, formulating adaptive actions, and pursuing the life that is expected of individuals (Savickas & Pouyaud, 2016; Venter & Maree, 2020; Wong, 2021). This innovative design approach and its application in life is a product of the insecurity present in the labor market caused by the information age. Life design encourages workers to become lifelong learners who are proficient at using cutting-edge technology, value flexibility over stability, keep their employability, and create their own opportunities. These new ideas about the workplace highlight that an individual's career is a personal matter and is independent of their employer (Duarte, 2004).

By applying Positive Psychology practices and a Design Thinking framework, this study serves as a compass that continually reflects the student's ongoing professional development path, assisting them in the academic and personal growth. More specifically, this study uses the Innovation process and learning styles Framework described in Beckman and Barry's (2007) study to consider how each method incorporates the key aspects of the Design Thinking learning process and which tools and techniques are used.

The primary objective of both methods is to increase students' understanding of personalized professional development by developing a connection between their identity, beliefs, and actions. This is accomplished by offering a structured process consisting of a set of tools that allows university students to discover what best fits their aspirations and possibilities before entering the professional world.

The use of design and business techniques previously utilized in the innovation industry as part of career orientation is a notion that has been present for several years. The primary purpose of Design Thinking is to modify one's perspective on a problem by emphasizing correctly describing the problem and encouraging the shifting from a fixed mindset to a growth mindset. Since its employment led to the development of many innovations, Design Thinking has become a key component in the strategy of many companies, awakening a recent interest in employment and educational management (Boland & Collopy, 2004; Starkey & Tempest, 2009). Design thinking methodologies can be adapted and utilized in career planning and decision-making. Design thinking's user-centric approach can help individuals better understand their skills, interests, and values, leading to more purposeful career choices.

## Methodology

To conduct this study, we analyzed the Design Thinking based career development methodologies that are implemented in University courses and have a supporting book. This resulted in: "Designing Your Life" by Bill Burnett and Dave Evans (2016) and "Empowering Students' Awareness for a Personalized Career Development. An Approach to Discover, Experiment, and Learn" by Guerci, Eric, Joanna Świętoniowska, Maria José Varadinov, and Matteo Vignoli (2022).

To compare the process and tools, we used Beckman and Barry's framework (2007):

- **Observations:** When it comes to designing your career, the first phase of the process is all about understanding your own needs, problems, and lifestyle in a specific context. Analyzing job market demands, skill gaps, and industry trends can guide individuals toward viable and promising career paths.
- **Frameworks:** Even the best design in the world can't solve every problem for every person all at once. A key part of the design process is defining exactly what issues it's important to address. In career design, this phase is about defining what are the principles and the elements to align the personal work identity with the job market.
- **Imperatives:** The "ideate" phase of the process is the part that most people imagine when they think of design thinking. In this phase evaluating multiple career options increases awareness and reduces decision biases. the importance of seeking feedback from mentors, peers, and industry professionals during the career development process. User testing helps individuals refine their career strategies and adapt to changing market demands.
- **Solutions:** In the prototype phase, you take your ideas and turn them into something tangible, trying out potential careers. This allows individuals to gain hands-on experience, test potential paths, and gather valuable insights to make informed career decisions.

Then, we performed a qualitative comparative analysis reporting evidence of similarities and differences (Ragin, 1987). From the literature, we identified the most relevant variables and assessed the two methodologies on that.

# Design Thinking in Career Development

## Designing Your Life

“Designing Your Work Life” by Bill Burnett and Dave Evans can be categorized as a self-help book targeting individuals who are looking to enhance their career satisfaction and design a fulfilling work life. The book utilizes a design thinking approach, providing readers with practical tools and techniques to identify their strengths, explore new possibilities, and navigate career transitions. The key concepts revolve around reframing one’s mindset, experimenting with different options, and learning from failures. The book incorporates case studies and real-life examples to illustrate its principles. In terms of structure and tone, it is organized in a systematic manner, guiding readers through a step-by-step process, and maintaining an encouraging and supportive tone throughout.

The DYL methodology uses the standard Design Thinking Phases, as it is possible to see from Fig. 1, from Burnett and Evans’s lectures.



Fig. 1  
DYL Process. Adapted from Stanford’s lecture slides.

The following table presents the main tools of DYL methodology, mapped with the framework of Beckman and Barry (2007):

Tab. 1  
DYL Tools and Phases.

| FRAMEWORK    | DYL PHASE            | TOOLS  |
|--------------|----------------------|--|
| Observations | Accept<br>Empathize, | AEIOU: observe the context to effectively to discover specifically what it is that is or isn’t working.<br>Life View: Conducting interviews to gain insights into people’s experiences and aspirations.<br>Good Time Journal: Keeping track of daily activities and identifying moments of engagement and fulfillment.   |
| Frameworks   | Define               | Workview: Defining your personal values, motivations, and interests related to work.<br>Reframing: Challenging assumptions and reframing problems to generate new perspectives.  |
| Imperatives  | Ideate               | Mind Maps: Visualizing and exploring various ideas and possibilities.<br>Odyssey Plans: Exploring multiple potential career paths and imagining different futures.   |
| Solutions    | Prototype, Test      | Prototyping Conversations: Role-playing conversations and testing different approaches in real-life situations.<br>Life design interviews and experiences<br>“Wayfinder” Tools: Practical exercises and frameworks to navigate career transitions and decision-making.<br>Failure Immunity: Cultivating resilience and learning from failures.<br>Small Bets: Taking small, low-risk steps to test and validate ideas. |

DYL was developed initially as a class at Stanford, and it is now a global phenomenon with classes in several universities, an online MOOC, and certified coaches offering workshops in organizations and institutions.

### The BE(A)ST Approach

“Empowering Students’ Awareness for a Personalized Career Development: An Approach to Discover, Experiment, and Learn” by Guerçi, Eric, Joanna Świątoniowska, Maria José Varadinov, and Matteo Vignoli primarily targets students and educators, aiming to empower students in their career development journey. The book introduces the BEAST approach that emphasizes self-discovery, experiential learning, and continuous experimentation. It focuses on developing students’ awareness of their interests, strengths, and values, and encourages them to actively engage in various learning activities and explore different career paths. It integrates DYL and Business Model You, together with other innovation and business tools. All the elements of the BEAST approach help young people in four key activities: finding personal resources gaps, career development, revising plans, and redesigning the career path if needed. The book incorporates tools and techniques such as self-assessment exercises, reflection prompts, and action plans. It also includes case studies and examples to provide practical insights. The book’s structure is designed to guide students through the process of personalized career development, and the overall tone is informative and educational, aiming to inspire and guide students in their career exploration.

BE(A)ST is a collection of 21 tools and techniques, such as daily exercises, rituals, reflections on thoughts, feelings, and beliefs, and a thorough career and life plan. As mentioned above, the main objective is personalizing the learning path leading to professional development. BE(A)ST is distinct in the four following stages: *Self-reflection*, *Professional identity definition*, *Career scenario exploration*, *Career prototyping and testing*. In each of these stages, each student profile has the opportunity to receive a set of carefully chosen tools and strategies to meet their personal needs (Guerçi et al. 2022), as it is possible to see in Fig. 2.

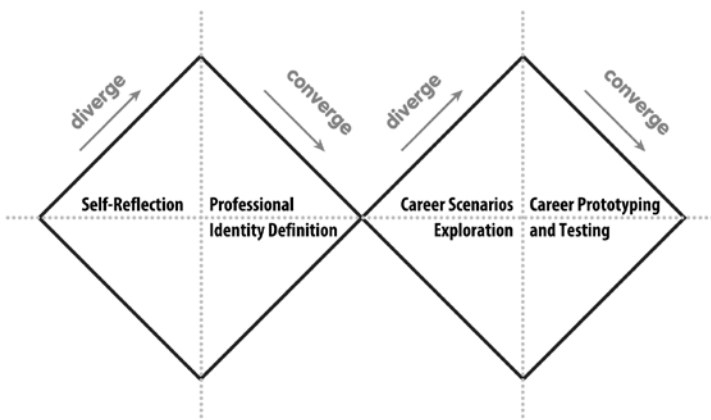


Fig. 2  
BE(A)ST approach.

In the developed course, Design Thinking is utilized as a framework for customized tools/techniques in the BE(A)ST approach, and it gives instructions on how to apply them during the framework's fundamental stages. The main objective of using Design Thinking is to offer students an experimentation workbench that allows them to produce a variety of prospective career routes from which they may choose, design, test, and apply for professional growth. Going into detail about these four stages:

- 1 *Self-reflection*: This stage focuses on the work and life view of the student and aims to deepen their understanding of what is really meaningful for them. This is an empowering process, where students are encouraged to self-reflect and discover their skills, attitudes, core beliefs, values, and interests, using the many tools available in their tailored path.
- 2 *Professional Identity Definition*: By evaluating the information gathered in the first phase, students better understand the professional life principles and personal resources and also assess their development.
- 3 *Career Scenarios Exploration*: Professional Identity Ideation brainstorming is used at this stage to assist students in selecting the professional identity that most interest them, taking into consideration personal resources and their alignment with the resources required for specific professions.
- 4 *Career Prototyping and Testing*: In the final stage, the student designs and evaluates a few career alternatives to better understand their opportunities. At this point, the student develops and tests the first prototype of their personal career path, which will be improved later depending on the feedback obtained during the testing phase.

Students are assessed and “matched” to a student profile that best represents their personality, interests, and needs, and on a secondary stage, are proposed tools that synthesize their personalized career plan. The evaluation of the student profiles is based on the four axes of student behavior regarding their overall level of career awareness and whether or not they act on it. More specifically, the four student profiles were categorized in terms of student career proactivity and student career decidedness (Guerci et al., 2022). In the figure below, the separation of each profile becomes evident,



Fig. 3 Student Profiles.

As demonstrated in Fig. 3, the four profiles are very different from each other and represent students at different levels of professional awareness and journey. Therefore, BEAST provides a tailored path for each of the four student profiles, including a set of tools to assist the student in each stage of the career design process: *Self-reflection, Professional Identity Definition, Career Scenarios Exploration, Career Prototyping and Testing*.

| FRAMEWORK    | PHASE/<br>STUDENT<br>PROFILE     | A   | B   | C  | D  |
|--------------|----------------------------------|---|---|--|--|
| Observations | Self-reflection                  | Life Dashboard, Talent Identification, Well-being compass           | Change of Perspective<br>Good Time Journal<br>External Observer<br>Life Dashboard<br>Well-being compass | Career Mind Mapping<br>Life Dashboard<br>Role Identification | Career Mind Mapping<br>Change of Perspective                         |
| Frameworks   | Professional Identity Definition | Design Life Principles, Identify your values, Talent Identification | Design Life Principles<br>Set Goals   | Career Mind Mapping  | Design Life Principles<br>Career Mind Mapping<br>Role Identification |
| Imperatives  | Career Scenarios Exploration     | Decision Tree, Odyssey Plan   | Odyssey Plan<br>Rich Pictures   | Career Mind Mapping<br>Odyssey Plan<br>Personal SWOT Matrix  | Career Mind Mapping  |
| Solutions    | Career Prototyping and Testing   | Personal Business Model Canvas                                      | Failure Reframe<br>Personal Business Model Canvas<br>Support Circle                                     | Career Mind Mapping<br>Change of Perspective                 | Failure Reframe<br>Personal Business Model Canvas                    |

As Tab. II indicates, for every student profile there is an average of two tools/experiences proposed at each stage of the exploration journey. Completing the personalized paths may take from a week to several months, according to the pace of each student and the format they choose to follow/ is offered at the higher education institution they attend. By the end of their personalized path, students should have developed personal awareness, a greater understanding of their career possibilities, desires, skills, and talents, as well as at least one (or, in some cases, multiple) action plan(s) outlining the steps they need to take to achieve their professional goals as well as a personal business model which is the final artefact for every student profile.

BE(A)ST was developed to be implemented by higher education institutions and therefore was established in a course format that can be offered as a separate compulsory or elective course within the study program. For this course, learning outcomes are defined and verified using the appropriate methods, and students realize these outcomes throughout the entire semester or year. The University of Modena and Reggio Emilia (UNIMORE), the University of Information Technology and Management (UITM), and the Polytechnic Institute of Portogruaro (IPP) are currently offering the BEAST course.

**Tab. II**  
Tools corresponding to the personalized career path of each Student Profile. Adapted from Guerici et al. (2022).

## Results

The two approaches share common elements in promoting student



engagement and active participation. Both approaches emphasize the importance of self-reflection, collaboration, and setting clear expectations. DYL, however, is a plain application of Design Thinking to Career Development, while the BEAST approach is student-centered and aims to empower students in their learning journey. The BEAST approach assumes that professional development should be based on prototyping, testing, and revising rather than planning and following long-term plans and should be focused on professional identity rather than on specific job position(s). Both approaches can complement each other in fostering creativity, critical thinking, and problem-solving skills in students. These methodologies emphasize the importance of finding purpose, aligning personal values with professional goals, and using design thinking to uncover a deeper understanding of career-related challenges.

By following the principles of design thinking, individuals can actively shape their career paths and make informed decisions about their professional lives.

| METHODS  | SUGGESTED TOOLS  |
|--|--|
| Designing Your Work Life   | Reflection exercises, mind maps, time audits, career dashboards, prototyping, storytelling, reframing, and design thinking personalized tools like the Odyssey Plan.   |
| Empowering Students' Awareness for a Personalized Career Development | Self-assessment tools, reflection exercises, career exploration activities, goal-setting worksheets, experiential learning opportunities, study program analysis, prototyping, and testing exercises (e.g. with Personal Business Model Canvas), industry research, mentorship programs, and networking exercises. |

Tab. III  
Tools comparison.

Both methods offer a range of practical tools to help individuals in their career development journey. "Designing Your Work Life" focuses on using design thinking principles and tools to design a fulfilling and meaningful career, while "Empowering Students' Awareness for a Personalized Career Development" provides students with self-assessment tools and activities to explore different career options and develop their skills.

Here is a table summarizing the main similarities and differences between “Designing Your Life” and “Be Aware Students”.

| Method               | “Designing Your Work Life”  | “Be Aware Students”  |
|----------------------|---|--|
| Main Focus           | Designing a fulfilling work life  | Empowering students for personalized career development  |
| Target Audience      | Students and Professionals seeking work-life balance                                  | Students and educators   |
| Methodology          | Design thinking principles applied to career development                              | An approach involving discovery, experimentation, and learning based on Design Thinking, Effectuation, and Business Model Thinking |
| Key Concepts         | Career design, reframing challenges, prototyping ideas                                | Personalized career development, self-awareness, experimentation   |
| Approach             | Practical, hands-on, action-oriented  | Experiential learning, reflective practice   |
| Benefits             | Enhanced work-life satisfaction, improved career outcomes, improving job satisfaction | Increased self-awareness, informed career decisions, personal growth, redesign education path if necessary                         |
| Tools and Techniques | Design mindsets, ideation, prototyping  | Self-reflection exercises, experiential activities   |
| Case Studies         | Real-life examples from various professions   | Examples from students' career journeys  |
| Structure            | Organized into chapters with exercises and activities                                 | Sequential/iterative approach with clear steps, checkpoints and tools  |
| Overall Tone         | Engaging, conversational, encouraging   | Educational, informative, supportive   |

## Discussion

Tab. IV  
Methods comparison.

This works focuses on a comparison of two leading methodologies that apply Design Thinking to career development. In fact, both methods emphasize the application of design thinking principles in the context of career development. They advocate for a user-centric and innovative approach to shaping one’s professional journey. Both aim to empower individuals in their career development. They encourage readers/students to experiment with various options, gather feedback, and make informed decisions to create a fulfilling career path. The authors recognize the importance of personalized career development. They encourage readers/students to discover their unique strengths, interests, and aspirations to tailor their career choices accordingly. They acknowledge the significance of continuous learning and growth in the career development process. They advocate for an iterative approach that allows individuals to evolve and adapt based on new insights and experiences. They all offer practical exercises, tools, or frameworks to facilitate the application of design thinking principles to career development. They provide readers/students with actionable steps to implement in their career exploration journey.

Differently, DYL targets a general audience, including professionals seeking to improve their work-life balance and find greater fulfillment in their jobs. In contrast, BEAST is specifically tailored for students, focusing on personalized career development for those in an academic context. While both methods apply design thinking to career development, DYL primarily focuses on work-life improvement, whereas BEAST concentrates on the holistic development of students’ careers. The context of career development varies between the two methods. DYL addresses the challenges

and opportunities individuals encounter in their existing work roles, while BEAST explores career development at the early stages of a student's academic journey.

In summary, both methods share a focus on design thinking in career development, but they differ in their target audience, scope, context, and depth of research. DYL caters to a broader audience and concentrates on work-life balance, while BEAST specifically targets students and provides insights into personalized career development in an academic setting.

While we have no information on how DYL was developed, BE(A)ST is a product of the design process using an abduction mindset (Dorst, 2011), proposing its methodology as a solution to the newly identified problem institutions and students of higher education face. This innovative approach stems from the realization that students need to be “equipped” with a set of tools that will enable them to recognize their strengths and strategically design their professional paths in light of the emerging challenges and fluidity in the professional world brought on by the VUCA world. Although the created course combines elements of the Management and Design literature, BE(A)ST differentiates itself, as it adds the component of personalization, validating Design practices in an academic context and addressing its significance in higher education.

B(E)AST encourages students to better design their careers by increasing self-awareness and pushing them to probe and validate new university courses, extracurricular activities, and career options. In a sense, this approach provides the framework for this continuous process of professional development discovery. Having acknowledged that “one size fits all” standardized testing, such as the SII (1994) — which adopts a mass-market approach to career planning — cannot create relevant solutions that fit human needs, the study team focused on design strategies to personalize career planning, B(E)AST approaches each student as an individual with their own needs, struggles and strengths, and leads to the design of a personalized career plan. The findings revealed that there is no universal obstacle that students face in career decisions/design, nor a universal student profile, as each student has their own personality and ambitions. Therefore, the study team felt compelled to establish a representation of these many “types” of students, which led to the construction of four international Student Profiles. This was considered the first reframe of the initial problem, from “how might we help students to be better prepared for their future professional life” to “how might we help different types of students to be better prepared for their future professional life”. Considering personalization, we can conclude that BEAST is an evolution of DYL.

Last but not least, another important aspect is the scalability of these approaches. Universities can employ BEAST and DYL as an alternative to traditional “one on one” and “one size fits all” career counseling by helping students to help themselves. Therefore, fostering career awareness is at the core of this methodology, making its practice sustainable for students to follow and possibly, revisit some stages of the approach throughout their professional careers. Nevertheless, offering personalized support and guidance to young students is an inextricable component of every educational institution that invests in the quality and sustainability of its foundation.

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## Conclusions

This analysis opens the way for further studies extending the integrated framework for students' career development at university. The main objective of this work is to rethink how career planning is addressed in the present educational system and to propose new, personalized and more efficient methodologies design based. Indeed, the design thinking methodology is at the core of the reflection and construction of the approaches by enabling the authors to propose practical and empirically validated tools to guide students' career development.

DYL and BEAST enable students (and career advisors) with original toolboxes and strategies that allow them to focus on the process of choosing a profession, while also emphasizing the social responsibility to educate young citizens on how to pursue their professional paths. In fact, as long as it is not only focused on employability criteria, career counseling, and awareness are important aspects of bridging the gap between higher education and the workplace. When seen as a process that requires strategic planning, assessment, staff professionalization, and a commitment to comprehensive education, career assistance in higher education is crucial in immersing students and graduates in their own personal and professional development to benefit their communities.

Because the established techniques are multifaceted, they may be employed by university stakeholders and Teaching Staff members, University Management Staff, and Career Offices. In fact, Design Thinking Career Development methodologies are a valid investment for universities willing to orient their students in designing carefully and proactively for their careers. The flexible course format can be easily implemented, providing higher education institutions with versatile and effective training offers for personalized career guidance to a large-scale audience.

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