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Summary of your partner organization's mission and product / service:

Salesforce is focusing on helping their customers to improve their customer relationships, helping customers succeed. They emphasize core values such as trust, customer success, innovation, equality, and sustainability. Thus, their main product is Customer Relationship Management (CRM) Platform, helping customers to manage sales, marketing, service, and customer data. Additionally, they also have a product name Agentforce, which is an AI agents platform. It delivers digital support across employees, departments, and business processes, enhancing workforce capabilities and elevating customer experiences. Besides that, the product that is most relevant to our project is Education Cloud, an integrated platform that delivers connected, data informed experiences for both learners and institutions.

Summary of the problem your team is working on:

One of the key elements of the problem outlined by Salesforce was how students' soft skills could be tracked by career service workers. As opposed to technical skills which tend to grow in a more linear fashion, soft skills are more non-linear in nature. As a result, the development of soft skills is harder to evaluate in a quantifiable manner, making it more difficult to track how a student's soft skills evolve over time. The question then becomes what methods career service employees can employ to create a more quantifiable framework for evaluating a student's developing soft skills.

List 1-3 questions that your background research report will answer:

1. **1.** What strategies are currently used to measure individuals' soft skills. **2.** What are the advantages and limitations of these strategies for career services?

Introduction

Nowadays, soft skills are considered essential in workplaces. Horváthová et al. (2022) showed that digital and interpersonal skills are considered to be the most crucial part by employers in the future (by 2030). Similarly, Poláková et al. (2023) showed that soft skills, particularly interpersonal abilities, are consistently in high demand among employers. Thus, developing soft skills is crucial to success in the workplace.

As the goal of career services is to help student success, they must help students develop not only their technical skills, but also soft skills. To do so effectively, they need credible ways to assess soft skills. Otherwise, their guidance may fall out of sync with job market needs. However, unlike technical skills, soft skills are much harder to evaluate in a quantifiable way. Therefore, we aim to identify a method that will help career services measure students' soft skill levels. As a first step, this study begins by examining existing solutions for quantifying soft skill levels.

Existing Approaches to Measuring Soft Skills

Self-Report Questionnaires

The most common, long-lasting and convenient approach to measure students' soft skill levels is through self-report questionnaires. For instance, Colledani et al. (2024) developed the Multiple Soft Skill Assessment Tool (MSSAT), a self-report instrument that contains 28 questions, to quantify the workers' interpersonal skills. In the education context, SKILLS and Attitudes in the ONE Questionnaire (SKILLS-in ONE) uses 74 questions designed to evaluate the 13 most common soft skills (Escolà Gascón & Gallifa, 2022).

It would be relatively simple for career services to create a questionnaire and gain a basic understanding of students' soft-skill abilities. However, these self-report questionnaires have undeniable limitations, such as self-report bias. Students might exaggerate their ability to get a higher score as they may assume that strong performance on a soft-skill test could help them get a job. Others might underestimate their ability due to culture factors or lack of confidence. Besides, some may also respond carelessly, without fully reading the questions. This makes it difficult for career services to accurately assess students' true ability. To address this issue, we have our second approach, which is asking others to fill up the evaluations (360 degrees evaluation).

Peer and 360-Degree Evaluation

According to Tariq et al. (2014), health care providers and staff who regularly interact with medicine resident physicians can provide moderately consistent judgments of their abilities. Nonetheless, this method also has significant drawbacks, as multiple evaluators familiar with the subject are required. Given the large student population, it is unrealistic for career services to find appropriate evaluators for each student. If classmates are used, some may not be familiar with students enough to provide accurate feedback. If students are asked to select their own evaluators, the feedback might be biased, as evaluators may avoid giving low grades due to personal relationships. In other words, peer evaluations may not be sufficient to reflect a student's true ability.

Video Analysis and SJTs

Apart from questionnaires, another approach is video analysis. In this method, participants are recorded while completing specific activities, such as answering interview questions. Later, their performance will be evaluated based on the videos. Research showed that the integration of video, audio and text data during evaluation enables a more comprehensive assessment of soft skills (Guerrero-Sosa et al., 2025). Videos allow non-verbal cues, such as facial expressions and body language, to be taken into consideration, improving the accuracy and interpretability of the assessment.

In addition, situational judgement tests (SJTs) are also considered valid and reliable tools to assess students' soft skills (Smith et al., 2020). SJT is a pre employment assessment that evaluates a candidate's decision-making and problem solving skills. It presents candidates with realistic workplace scenarios and asks them to select or rank the best responses.

However, both assessments have notable limitations. They can introduce performance variability, as individual results may differ based on the scenario or recording conditions, which might affect the reliability of results. Some students may try to act perfectly, while others may not demonstrate their true ability due to nervousness. Furthermore, although these approaches provide career services with rich data, they are also resource-intensive: designing scenarios requires significant effort, and evaluators must review each video or test individually, making them costly to implement at scale. With the large number of students at universities, it would be unrealistic for career advisors to review every submission. In addition, if career advisors want to track the improvements in students' soft skills over time, they would need to review at least two videos per student, which further increases their workload.

AI-Based Assessments

In addition to manual assessment methods, we now also have the AI assessment method. Most of these methods use traditional machine learning algorithms to analyze video or text data (Rasipuram et al., 2020). These approaches are suitable particularly for large-scale assessments, as they do not require any human evaluators to participate. However, they remain resource-intensive because training a reliable model is extremely expensive and time-consuming. For universities, investing significant resources solely to evaluate soft skills is largely impractical.

Comparative Evaluation

When comparing different approaches to measuring soft skills, a clear trade off emerges between practicality and accuracy. Self-reviewed and peer-reviewed questionnaires are attractive because they are low-cost, quick to administer, and scalable. However, these strategies could suffer from severe bias, such as self-report bias, which makes them unreliable measures.

Video analysis and SJTs provide richer insights by including non-verbal cues and decision-making in realistic contexts. These assessments are generally considered as valid and comprehensive, but their effectiveness comes with significant costs in time and staffing. For career services, it is infeasible to review hours of video. Training AI models to perform such analyses could be a solution, as they can process large amounts of text or video data without direct human involvement. However, it would likely be prohibitively expensive and time-consuming to implement.

Overall, this comparison suggests that a blended approach, pairing scalable tools like questionnaires with AI models or video analysis for deeper insight, offers the best balance between feasibility and validity.

Conclusion:

Thus, it is evident that there are a great number of methods to quantify soft skills. However, all these methods have their own advantages and limitations in accurately capturing soft skills or practically implementing. Career advisors cannot realistically review thousands of student videos, nor can they ignore the bias in self reports. Therefore, career services need scalable but reliable tools. In the future, we might need to integrate different approaches to maximize the benefits and minimize the drawbacks of each approach. For instance, questionnaires could be combined with non-verbal cue analysis, or SJTs could be integrated with traditional assessments, to provide a more comprehensive and objective evaluation of soft skill levels with lower costs.

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