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Who They are Versus What They Want: How Dominance, Influence, Steadiness, and Compliance Profiles can aid in Developing Employability

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Abstract

This paper draws attention to a behavior-based assessment instrument that is frequently utilized in industry settings but less utilized in the academic classroom. The authors argue that this instrument, the dominance, influence, steadiness, and compliance (DISC) profile, can be useful in training and developing soft skills desired

by employers. They also examine the effects of gender and work experience on the various DISC patterns to better understand how this instrument may be useful for coaching and mentoring in those academic and organizational contexts. In this study, DISC pattern data were gathered from 1547 undergraduate and graduate students across multiple universities in the USA. A multivariate analysis of variance was performed on the data and the results show males scoring higher on Dominance and females scoring higher on Steadiness, as predicted. Females scored higher on Compliance, contrary to predictions. Graduate students scored higher on Dominance and undergraduates scored higher in Steadiness, as hypothesized. Undergraduates also scored higher on Influence than did graduate students. Such differences in DISC profiles suggest that, as a behavior-based instrument, DISC may be helpful for students in understanding their behavioral tendencies as well as identifying workplace behaviors needed to bridge the gap between the soft skills employers want and the competencies students possess.

Introduction

The term “soft skills” typically refers to those skills that are essential for effective interpersonal relationships, especially in the workplace (Succi and Canovi, 2020). A considerable amount of academic research on human resource management and career development is focused on the importance of organizations matching the technical and interpersonal skills they need with available human resources (Hayes et al., 2000; Stewart, 2021; Succi and Canovi, 2020). Most technical skills (e.g., accounting and computer programming) can be assessed objectively with measures of competency in the classroom and on the job. The shortage of soft skills was identified many years ago (e.g., Taylor, 2005), yet finding employees who can demonstrate mastery of softer interpersonal skills (e.g., teamwork and oral communication) continues to plague employers. Developing mastery of these skills and demonstrating the competency in effectively using them depends in part on using tools that are effective in putting established theory into actual practice (Fernandez and Liu, 2019; Mintzberg, 2004).

One remedy for the disconnect between the soft skills that are needed for success both in college and in the workplace is to focus on developing synergies between the language found in academic articles and books and specific tools that provide practical opportunities for skill development. Companies tend to seek emotionally intelligent employees (Fernandez and Liu, 2019; Krishnakumar and Rymph, 2012), and yet the specific soft skills and actual competencies they seek can vary across organizations and industries. For example, the 2020 Job Outlook report published by the National Association of Colleges and Employers (NACE, 2019) forecasts that 82% of employers with intentions to hire new college graduates will continue to focus on critical thinking, problem solving and teamwork when reviewing graduates’ resumé. The International Association of Administrative Professionals reports that 67% of HR managers prefer candidates with strong soft skills even if their technical abilities are lacking (Feffer, 2016). Forecasts also continue to emphasize professionalism/work ethic, oral/written communication skills, and effective leadership skills as career readiness competencies needed for a successful transition from college to the workplace (NACE, 2019). The specific interpersonal skills may differ from one company to another, and Fettes et al. (2020) have pointed out that context is important in understanding which soft skills are most appropriate. However, companies still bemoan the lack of employees who can handle their own and others’ emotions (i.e., emotional intelligence) (Fernandez and Liu, 2019; Krishnakumar and Rymph, 2012).

In examining potential tools for increasing self-awareness and self-regulation as soft skills (Goleman 1995), a host of proprietary tools has been examined in academic research (e.g., Hogan Consulting Group/Assessments or Big Five personality assessment). Yet studies examining more behavior-based tools that are popular in industry are more difficult to find. Commonly used behavior-based training assessments such as the DISCFlex assessment (Davis et al., 2011) or the dominance, inducement, submission, and compliance (DiSC) Indra

instrument (Cole and Tuzinski, 2003) have received little research attention among academic scholars (Fertig and Milewicz, 2018; Forsyth et al., 2016; Henkel and Wilmoth, 1992; Jones and Hartley, 2013). In postulating why such a gap between academics and practitioners continues to exist (Bartunek and Rynes, 2014), it appears that academic theory and research have largely overlooked the examination of practical tools—some such tools have been taken by over 50 million people and have appeared in books published in at least 35 languages (Jones and Hartley, 2013). Hence, examining practitioner-oriented tools from an academic point of view can aid in providing a baseline for improving students' soft skill competencies in line with those desired by prospective employers, thereby enhancing employability.

As such, this study has two purposes. The first is the application of a more scholarly lens to the DISC assessment. We investigate a dataset of DISC patterns to explore the individual differences in gender and experience, and to help predict the behavioral competencies of undergraduate and graduate students. The second aim is a closer examination of the gap individuals may encounter as they transition from an academic environment to employment in their chosen field. This study considers the benefits individuals derive from increased awareness of their behavioral tendencies and preferences, while identifying developmental strategies for enhancing interpersonal relationships commonly encountered in the workplace (i.e., development of emotional intelligence (EI) self-awareness). Essentially, until new graduates and less-experienced employees own and understand the implications of their own interpersonal strengths and weaknesses upon entering the workforce, universities will fall short in effectively guiding them in career preparation activities designed to meet employers' requirements for soft skill readiness.

First, evidence is provided to support the assertion that soft skills continue to be in high demand and that there is a lack of soft skills among job candidates (Feffer, 2016; Fernandez and Liu, 2019). A brief examination of soft skills emphasized in college, employment, and career counseling contexts is also presented. Arguments are then provided in favor of the use of the DISC assessment for baselining college students and young professionals for further soft skill development. Key strengths of the DISC assessment are discussed, including the quick and easy administration of the tool and the cognitive and visual simplicity of the results for typical users. It is argued that DISC characteristics make it an effective tool for both employers and academics seeking more applied strategies to interpret job seekers' soft skills and assisting in developing mastery of these skills. It is noted that, although the DISC instrument includes elements of Jungian psychology and leadership variables in assessing behavioral tendencies, it is *not* a personality test. Noting this distinction is crucial for articulating the benefits of the tool for use in training designed to enhance emotional intelligence (Forsyth et al., 2016). It is even more important to highlight the distinction since, even within the limited scholarly work on DISC (e.g., Jones and Hartley, 2013), authors commit a semantic error by labeling DISC the "DISC Personality Profile". Although doing so colloquially may not be scrutinized by practitioners, it may lessen the instrument's utility in the eyes of some scholars, many of whom question its worth when compared to the well-established Big Five Personality instrument. Such mischaracterization of the DISC assessment only widens the gap between industry and research. As Aguinis et al. (2020) suggest, "...at least one publication targeting a practitioner audience can motivate faculty to think of the practical relevance of their research" (p. 145). It is hoped that this study opens the door a bit wider for additional studies that bridge the gap between research and practice and encourage greater synergy between scholars and employers.

Soft skill research review

Managers in most organizations continue to agree about the need for workers with effective personal and interpersonal skills beyond the required knowledge and technical aptitude necessary for various positions (Davidson, 2016; Fernandez and Liu, 2019; Robles, 2012; Stewart et al., 2016). Recently, LinkedIn Talent Solutions surveyed more than 5000 talent professionals and hiring managers about the skills their organizations

sought for present and future success. Of those surveyed, 80% believed that soft skills were not only increasing in importance, but were viewed as critical success factors for their firms to achieve key performance outcomes (see Global Talent Trends, 2019). The same study reported that more than 90% of talent professionals from 17 different countries viewed soft skills as the most important skills for effective recruitment and management of their talent pipelines.¹ Clearly, employing talent who possess these skills is important for domestic and global success. However, inadequate pools of applicants with these requisite soft skills continue to exist (Denison, 2018; Feffer, 2016; Rockwood, 2019; Rubin and Dierdorff, 2011).

Despite the increasing demand from industry for job candidates with soft skills (Robles, 2012), college professors and managers across a variety of organizations still struggle to convince students (and some faculty colleagues) about the importance of the need to continuously develop soft skills in tandem with the mastery of the hard skills necessary for the chosen profession (Patacsil and Tablatin, 2017). In examining the gap between what employers want and what students believe they possess, Stewart et al. (2016) found that the majority of college graduates report confidence in their soft skills. However, the researchers found that students were over-confident relative to the effective demonstration of these skills, even portraying some of them as narcissistic and self-centered—although not all researchers agree (Stewart et al., 2016: p. 280). Clearly, a lack of consensus remains.

Technical fields also seek applicants and employees who possess effective interpersonal skills. A recent study involving alumni holding degrees in Management Information Systems revealed a significant gap between interpersonal skills (e.g., critical thinking, oral and written communication, and teamwork) and technical skills (e.g., programming, database use, and object-oriented modeling) and showed that soft skills were more critical for success on the job than were technical skills. The surveyed managers stated that technical skills could be taught; however, they expected new hires to already possess the difficult-to-find soft skills (Al-Hashimi et al., 2019). A 2014 survey conducted by Robert Half, a global human resource consulting firm that specializes in accounting and finance, claimed that top-notch soft skills are not just a preference among employers nowadays; they are expected for *most* jobs. Furthermore, an article published by the Institute of Electrical and Electronics Engineers (IEEE) suggests that companies hire based on an ability to do the “technical stuff that creates a positive cash flow” despite soft skills being valued more now than they were 15 years ago. Those skills were thought to positively affect the productivity of engineers and their co-workers (Kawamoto 2016, par. 12). Among corporate finance professionals, the top five interpersonal skills considered as personal competency assets are effective teamwork, problem solving, decision making, communication skills, and working well under pressure. Those skills are understood to provide an additional strategic competitive advantage for finance professionals recruited by firms seeking a demonstrated mastery of them (Dixon et al., 2010). Consiglio et al. (2013) noted that many organizations benefit from focusing on work-related competencies rather than adopting theory-based trait assessments. They also argued that such competencies tend to be more flexible and can be generalized to a broader range of work areas than can traditional context-specific skill sets. As Fowler recently noted (2018):

Central to employee development, competencies are the basis for training curricula, performance standards and reviews, promotion criteria, and career planning. Beyond employee development, competencies also influence protocol and decision making for selection and hiring, compensation schemes, retention management, succession planning and supporting organizational change (p. 2).

The soft skills mentioned by employers are a collection of demonstrable competencies that can be developed and practiced regardless of one’s personality traits. To illustrate, although selling behaviors may be more initially stressful for an introvert, trait-based assumptions that an introvert may not be successful in selling directly to customers is short-sighted. Keeling et al. (2019) argue that a perceived inability to communicate effectively may

create barriers for veterans seeking an effective transition to civilian employment. Although veterans are considered an excellent source of talent, a perceptual mismatch may exist between the ability to communicate effectively in military contexts (e.g., command-oriented exchanges) and the more personal style of communication commonly found in many non-military organizations (Dieter, 2019). As a result, properly educating, training, and developing the soft skill competencies of those entering the workforce necessitates appropriate tools that are neither overly theoretical nor too generic to be useful in practice.

Although such tools exist, scholarly research on such competency assessments (e.g., DISC) continues to be scant (Fertig and Milewicz, 2018; Forsyth et al., 2016; Henkel and Wilmoth, 1992; Jones and Hartley, 2013). To address that gap, this study extends research by examining one popular behavior-based instrument, DISCFlex, currently administered by Indaba Global, to stimulate additional discussions about the usefulness of professional industry-related tools for soft skill development. In the next section, the discussion is focused on highlighting distinctions between competency-based and trait-based assessments.

Baselining soft skill competencies

Howard and Howard (2010) asserted that a trait or combination of traits is necessary—but insufficient—for an individual to develop a behavioral competency. They argued that the competencies discussed most often in the workplace are associated with a trait infrastructure that gets broken down into “super traits” and “sub traits” (p. 213). Despite the rigor of this type of theoretical underpinning, this infrastructure is useful for scholarship but may be overwhelming for the organization or career center seeking to recruit and train employees with valuable soft skills. In the transition from education to work, it is more compelling to focus efforts on developing and mastering the competencies individuals need to provide much-needed competitive advantages to organizations rather than an emphasis on assessing traits that are unlikely to change (Nawangarsi and Sutawidjaya, 2019). Mastering the various subfactors, super- and sub-traits in the Workplace Big Five Profile for use in practice can be time-intensive and draw organizational resources away from other critical success factors.

The DISC profile

One such competency-based instrument is the DISC Profile. Based on a behavioral adaptation of Marston’s (1928) work on the nature of emotions, the DISC framework is a two-by-two matrix represented by task-orientation and relationship-orientation on the x-axis and extraversion and introversion on the y-axis. The matrix is the foundation for four primary behavioral patterns (see Figure 1). While Marston (1928) posited the primary “emotions” of Dominance, Inducement, Submission and Compliance as benchmarks that guide varying reactions to environmental stimuli over time, the associated DISC factor names have been revised from Marston’s (1928) terminology to better fit the language of work in modern society (e.g., Dominance, Influence, Steadiness, and Compliance; see Davis and Klassen, 2012).

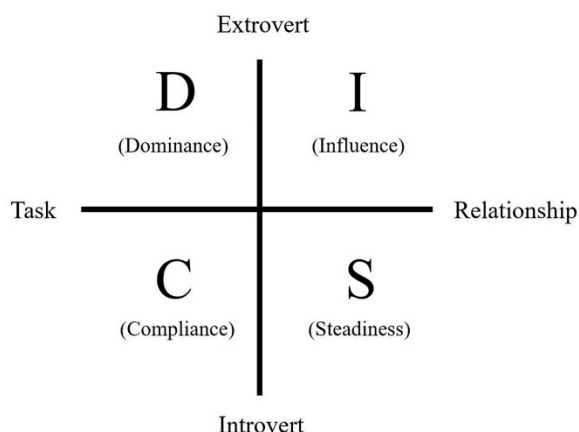


Figure 1. The DISC Profile.

Competency assessments are both effective and efficient. Holland (1985) argues that such assessments yield outcomes that can be (1) easily observed, (2) organized to yield predictions of behavior, (3) easily communicated, and (4) amenable to change. Individuals' DISC scores are reflected through their behaviors (i.e., easily observed). While individuals do not act in accordance with their profile 100% of the time, DISC profiles allow for speculation on future actions and areas for behavioral improvement (i.e., organized to yield predictions of behavior). The two-by-two model of DISC constructs can be less cognitively demanding than an independent, multivariable typology, while still retaining its popularity with practitioners (i.e., easily communicated). By design, DISC scores can also change over time (i.e., amenable to change) as individuals adapt their behaviors.

In the DISC Profile designed by Davis and Klassen (2012), Dominance (D) is centered around a person's need to be direct. Individuals with higher Dominance tend to like giving instructions or orders, have no problem delivering commands, like things done their way and strive for results. Some words that describe Dominance's typical positive behaviors are innovative, competitive, enterprising, strong, determined, and visionary. Words that describe the typical negative behaviors in Dominance include challenging, self-centered, arrogant, and controlling.

The Influence (I) competency is focused on one's ability to be persuasive. Inducing others to go above and beyond is characteristic of higher Influence. Words that describe the typical positive behaviors for Influence are motivating, charismatic, upbeat, friendly, and caring. Typical negative behaviors that describe Influence behaviors are overly talkative, emotional, changeable, unpredictable, and easily distracted.

Steadiness (S) in the DISC profile is characterized by steadfastness, thoughtfulness, and patience. Individuals with higher Steadiness generally take their time when formulating thoughts, thus operating at a slower pace. They also tend to prefer harmony over conflict. Some words that describe positive Steadiness behaviors are consistent, thoughtful, reliable, calm, and relaxed. Words that describe negative Steadiness behaviors are rigid, reluctant to change, and paralysis by analysis.

Lastly, Compliance (C) is defined as one's need for structure. Individuals with higher Compliance focus on policies, procedures, rules, laws, and details. Descriptions of the typical positive behaviors for Compliance are methodical, systematic, detail-oriented, precise, accurate, and organized. Some words that describe Compliance's typical negative behaviors are painstaking, exacting, nit-picking, and overly cautious.

Generally, lower DISC scores in any given DISC variable do not signify an absence of the behaviors associated with that variable. Rather, they reflect behavioral competencies that are less stressful to the individual (Davis and Klassen, 2012). Thus, a soft skill such as oral communication may be less stressful for the person with a higher score in Influence vis-à-vis the person with a higher score in Compliance. However, the individual with a higher Compliance score is still capable of proficiency in oral communication; it just requires more skill development and stress management to increase one's self-efficacy. Furthermore, the ability to process all four DISC variables and their combinations at once in a visual framework aids in understanding one's preferred behaviors and enhances understanding of the behaviors of others. This notion allows for the DISC instrument to be effective in training designed to enhance emotional intelligence, another skillset associated with career success (Forsyth et al., 2016; Goleman, 1995). Rather than labeling individuals as less likely to successfully exhibit a given skill because of certain traits they possess, DISC profiles generate a baseline for individuals' comfort levels for certain behaviors and offer opportunities for developing one's less comfortable behaviors.

The next section examines some individual differences that may exist relative to DISC profiles. This is presented to examine ways to further enhance the ability of mentors, coaches, and career counselors to pinpoint opportunities for personal development among students and clients.

Individual differences in DISC profiles

Gender

In a longitudinal study, Luo (2021) notes that the percentage of women earning college degrees shows an increase between 1985 and 2000, “reflecting the general national trend that women are making gains in college participation and degree attainment” (p. 61). Accordingly, examining DISC profiles by gender may reveal potential gender effects. Because no single DISC profile is preferred over others, such distinctions would not be a condemnation of any gender; rather, such information is viewed as a starting point for the training and development of individual behavioral competencies. Although a detailed examination of different theories related to male and female behavioral differences (e.g., social role theory and evolutionary psychology perspectives) is beyond the scope of this paper, there is evidence to highlight possible differences between the genders in the behaviors assessed on the DISC instrument. Research on gender frequently pays homage to early contributions by Lewin (1951). The early work suggested that society tended to socialize men and women to adhere to their respective gender roles, especially during interpersonal interactions (Eagly, 1987). More recent research suggests that gender effects are more complex. For example, West et al. (2012) found that, although team performance was not significantly influenced by gender distribution, individual task contributions of group members were evaluated more negatively by all group members when the proportion of women in the group increased. Regarding leadership and gender, leaders’ behaviors may be influenced not only by gender norms but also by organizational role requirements, situational contexts, and attitudinal biases (Eagly and Johannesen-Schmidt, 2001; Eagly and Karau, 2002; Eagly et al., 2000). Furthermore, Eagly and Johannesen-Schmidt (2001) found that female managers exhibited significantly more transformational leadership behaviors than men, especially on relationship dimensions (e.g., mentoring, attending to individual needs, and communicating vision), while men tended to engage in more competitive behaviors. Although the more competitive behavior was not exclusive to males, males placed a greater emphasis on keeping score. Other behavioral research suggested that females engaged in behavior that was more participative and focused on sharing (Buunk et al., 2005; Tannen, 1990), while also perceiving bullying more often than men (Kakarika et al., 2017).

Taken together, extant gender research suggests discrepancies between genders on task-focused and relationship-focused behaviors. Thus, it is hypothesized that gender differences exist between Dominance and Compliance vis-à-vis Influence and Steadiness in the DISC profile, as illustrated in Figure 1.

- H1: There will be a gender effect between DISC profiles such that females show more elevated Influence and Steadiness, whereas males show more elevated Dominance and Compliance.

Experience

Because DISC scores reflected preferred behaviors that have the potential to change over time, those with more work or life experience could score differently on some variables than less-experienced workers. Fernandez and Liu (2019) found that individuals who more frequently exercise soft skills in the workplace have more occupational status than those exhibiting fewer soft skills, even among degree holders. Moorer (2009) examined differences between undergraduate and graduate business students and found that undergraduate students tended to need greater development of interpersonal and conceptual skills to perform at the same level as graduate students. He suggested that undergraduate students demonstrated a lower level of interpersonal maturity towards new experiences than graduate students. The notion that older graduate students are different from younger undergraduates is not novel, but using DISC to explain such differences for the purposes of developing interpersonal skills adds to the understanding of such differences. When comparing traditional undergraduate students to graduate students with work experience, there is a likelihood that those two groups would have different DISC scores. Whereas undergraduates may be focused on obedience in the classroom to

achieve high grades, graduate students are more likely to have been exposed to more leadership responsibilities in their day-to-day work to achieve success on the job. Thus, it is speculated that there will be higher Dominance and Influence in graduate students' DISC profile, and more Steadiness and Compliance in undergraduates' DISC profiles.

- H2: There will be differences in DISC scores between undergraduates and graduate students such that undergraduates show more elevated Steadiness and Compliance, whereas graduates show more elevated Dominance and Influence.

Methods

Participants

The DISCFlex instrument from Indaba Global was administered to 1547 undergraduate and graduate student participants from four universities across the USA as part of their course assignments. Two of the institutions were large public universities, with one located in the Midwest and one on the West Coast. A third institution was a medium-size public university in the Midwest, and the fourth was a small, private college on the East Coast.² The sample was 45% female with 53% and 47% undergraduate and graduate students, respectively. Among respondents who reported ethnicity, 89% were Caucasian, 5% were Asian, and 2% were African-American and Hispanic. Although participants were not directly surveyed for years of work experience by the vendor, the graduate student programs in which participants were enrolled required a minimum of two years of work experience. In addition, undergraduate students were younger than 25. Among graduate students who reported their age, 23% were under 25, 63% were between 26 and 40 and the rest were over 40.

The DISCFlex instrument

Due to the proprietary nature of many DISC tools, and their use in training curricula in industry, various iterations of DISC instruments exist and not all have been statistically validated. Thus, it is argued that any research on DISC that attempts to bridge theory and practice should use instruments that are widely used and methodologically sound. For this study, the established DISCFlex instrument developed by Indaba Global was administered. One strength of the DISCFlex instrument is the existence of a validation study supporting the four primary DISC profiles (Dominance, Influence, Steadiness, and Compliance) in which Cronbach's alphas were at or more than 0.758 (Davis and Klassen, 2012). The DISCFlex instrument includes two parts with 60 total items, each having a maximum assessment score of 100 for each DISC factor. The first section contains 40 evaluative statements (10 per DISC factor) rated on a five-point Likert scale that ranges from 0 = "strongly disagree" to 4 = "strongly agree", yielding the highest single competency score of 40. The second section contains 20 items, each containing a series of four words associated with DISC's primary factors. Those words are scaled using a four-point Likert scale ranging from 0 = "least like me" to 4 = "most like me" across each competency, with the highest single competency score of 60. Scores from both scales are then combined for an overall total score ranging between 0 and 100. The DISCFlex tool also generates a personalized report for use in training and development sessions through Indaba Global's built-in algorithms that present the scores on the four DISC competencies in coaching language (e.g., primary motivators and stressors).³

Results

To assess differences in DISC variables across gender and program level, a two-way multivariate analysis of variance (MANOVA) was conducted. Before computing the MANOVA, to confirm there was no violation of multicollinearity, correlations were run for the DISC-dependent variables and are reported in Table 1 along with other descriptive statistics. The relative strengths of the correlations conformed to the circumplex orientation of DISC variables, as suggested by Scullard and Baum (2015). To assess the construct validity of the DISC

instrument, we also followed the methodology used by Scullard and Baum (2015) for their DiSC instrument. Similar to their study, moderate correlations existed between adjacent DISC variables in Figure 1 (D–I, D–C, and I–S) and stronger negative correlations existed between opposing DISC variables (D–S and I–C).

Table 1. Correlations and descriptive statistics.

		Mean	St. Dev	Min	Max	1	2	3	4
1	Dominance (D)	52.61	11.83	17.00	90.00	1.00			
2	Influence (I)	48.83	12.65	16.00	86.00	0.18**	1.00		
3	Steadiness (S)	60.38	10.12	26.00	88.00	-0.69**	-0.26**	1.00	
4	Compliance (C)	54.53	13.56	15.00	91.00	-0.40**	-0.65**	0.18**	1.00

Note: $N = 1547$; ** $p < 0.01$.

Results from the MANOVA test are presented in Table 2. Box’s Test was not significant. Thus, covariance matrices are assumed to be equal. The results showed significant main effects and small effect sizes for gender (Wilks’ Lambda = 0.96, $p < 0.01$, effect size = 0.04) and program level (Wilks’ Lambda = 0.93, $p < 0.01$, effect size = 0.07). The interaction between gender and program was not significant.

Table 2. Two-way MANOVA statistics.

Effect		Value	F	Hypothesis df	Error df	Partial eta squared
Intercept	Wilks’ Lambda	0.01**	185894.271	4	1540	0.998
Gender	Wilks’ Lambda	0.96**	16.893	4	1540	0.042
Program	Wilks’ Lambda	0.93**	30.779	4	1540	0.074
Gender*Program	Wilks’ Lambda	0.99	1.532	4	1540	0.004

Note: ** $p < 0.01$.

To provide more detailed analyses of the main effect differences, post hoc Independent Samples t-tests were computed for gender and for program level relative to each DISC variable. The results are presented in Table 3. Hypothesis 1 was partially supported as males scored higher on Dominance than females (55.39 > 49.42, $p < 0.01$, effect size = 0.33), and females scored higher than males on Steadiness (62.07 > 59.00, $p < 0.01$, effect size = 0.30). However, males also scored higher than females on Influence (49.55 > 47.94, $p < 0.05$, effect size = 0.13), and females scored higher on Compliance than males (56.40 > 53.01, $p < 0.01$, effect size = 0.25). Hypothesis 2 was also partially supported as graduate students scored higher on Dominance than undergraduate students (55.36 > 50.05, $p < 0.01$, effect size = 0.28), and undergraduate students scored higher than graduate students on Steadiness (61.68 > 58.92, $p < 0.01$, effect size = 0.28). However, undergraduate students also scored higher than graduate students on Influence (50.64 > 46.81, $p < 0.05$, effect size = 0.30). In addition, the difference between the groups was not significant for Compliance.

Table 3. Independent samples t-tests.

Std error								95% CI of the difference	
	Gender	N	Mean	Std dev	Mean	t	df	Lower	Upper
Dominance	Male	855	53.39	11.77	0.40	6.64**	1545	2.79	5.13
	Female	692	49.42	11.55	0.44				
Influence	Male	855	49.55	12.81	0.44	2.51*	1545	0.35	2.88
	Female	692	47.94	12.41	0.47				
Steadiness	Male	855	59.00	10.08	0.34	-6.00**	1545	-4.08	-2.07
	Female	692	62.07	9.93	0.38				

Compliance	Male	855	53.01	13.76	0.47	-4.93**	1545	-4.74	-2.04
	Female	692	56.40	13.07	0.50				
					Std error			95% CI of the difference	
	Program	N	Mean	Std dev	Mean	t	Df	Lower	Upper
Dominance	Undergraduate	816	50.05	11.53	0.40	-5.55**	1545	-4.48	-2.14
	Graduate	731	53.36	11.93	0.44				
Influence	Undergraduate	816	50.64	12.41	0.43	6.01**	1545	2.58	5.08
	Graduate	731	46.81	12.62	0.47				
Steadiness	Undergraduate	816	61.68	9.66	0.34	5.39**	1545	1.75	3.75
	Graduate	731	58.92	10.44	0.39				
Compliance	Undergraduate	816	54.32	13.08	0.46	-0.65	1545	-1.81	0.90
	Graduate	731	54.77	14.08	0.52				

Note: * $p < 0.05$; ** $p < 0.01$.

Discussion

Given the soft skills employers want and the information the DISC assessment provides, it was argued that the DISC instrument might help bridge the gap between soft skill development and skill readiness (Burke and Rau 2010). Results from this study suggest that early career individuals and females displayed higher Steadiness and Compliance DISC scores, which manifest in a preference for harmony, organization and, most importantly, patience, which is needed to develop critical thinking abilities—one of the skills desired by employers (NACE, 2019). Although the higher Steadiness scores among females suggests that supportive behavior towards others is strong, especially in the workplace, such behaviors might also be misconstrued as lacking in oral communication skills, leadership ability or assertiveness, especially by those who maintain an extrovert ideal as the basis for soft skill proficiency (Cain, 2013). Coincidentally, given that 53% of the sample was traditional full-time students, the elevated Steadiness scores may also be attributed to years of adapting to formal schooling, where classroom protocols frequently require students to seek permission to participate. As suggested by Blau and Shamir-Inbal (2017), while successful instances of co-creation might occur in the classroom from time to time, such instances are not the rule.

Even though Steadiness and Compliance competencies were predominant in this group of respondents, DISC profiles do not denote fixed traits, nor should they be viewed as reinforcing past stereotypes (Shrader et al., 2020). A key characteristic and benefit of behavior-based assessments like DISC is that the scores and associated reports provide a baseline for existing soft skills and a relatively neutral language for referring to one's preferred actions. Although trait-based assessments provide some opportunities for behavior modification and enhancement, the visual appeal and simplicity provided in DISC reports highlights immediate opportunities for developing strategies and modifying existing behavior up or downward to improve effectiveness across a myriad of contexts. In other words, knowledge of one's scores is only the first step in capitalizing on the information provided in DISC reports. Specific behavioral examples and visual representations of both personal and team scores are provided to enable individuals to take the next step: identifying specific behavioral strategies for modifying behavior toward more effective outcomes, contingent on the situation. And, when taken as part of team development activities, DISC reports also provide information useful for identifying similarities and differences in others' profiles, thus creating opportunities for discussion of success in future interactions. In both classroom and workplace contexts, training can focus on identifying situations in which one's DISC competencies might be effective. DISC reports also offer opportunities to reflect on past situations and anticipate future situations in which one's preferred behaviors might prove more stressful or less comfortable. Over time,

individuals can learn to reduce the stress that accompanies less-preferred behaviors or tendencies, or even to alter aspects of their profile entirely (Davis et al., 2011). This latter notion may be considered a potential weakness of instruments that assess stable traits. However, it is a strength of behavior-based instruments like DISC that they provide easy-to-understand reports that highlight behavioral areas of strength and weakness that can be immediately considered, developed and applied.

In addition to increasing self-awareness, understanding others' DISC tendencies renders the instrument useful as a tool for enhancing emotional intelligence (EI) (Forsyth et al., 2016). As noted earlier, many of the soft skills employers desire when hiring candidates and seeking to develop employees are competencies that are touted in EI research and practice (e.g., leadership skills, oral communication, and teamwork) (Dixon et al., 2010; NACE, 2019). As one example, academic research highlights a strong correlation between EI skills and effective leadership (George, 2000; Goleman, 1995; Goleman et al., 2009; Grunes et al., 2014; Zeidner et al., 2004; Zhou and George, 2003). Other academic research emphasizes the opportunity to identify a baseline measure of one's overall EI (e.g., Bar-On, 1997; Mayer and Salovey, 1997) but are not used per se to develop or enhance existing EI competencies. Work by Forsyth et al. (2020, p. 14) provides support for using a DISC instrument to develop specific EI behaviors based on a common "language of behavior" that allows an individual not only to understand one's own behavior but to easily consider preferred behavior when interacting with others in different contexts. In addition, DISC reports provide a platform for individuals to examine team profiles, enabling team members to learn adaptive behaviors for more effective teamwork. And, in the case of some DISC assessments, individuals are also able to solicit third-party feedback from a variety of individuals and groups (e.g., team members, friends, family, and co-workers). Such 360-degree feedback provides additional opportunities for enhanced self-evaluation, with important insights into how one is perceived. Such insights are crucial for the development of leadership competencies (Dai et al., 2010).

The effective use of DISC for expanding one's EI involves training to identify the different patterns of behavior and understanding which distinct groups are likely to exhibit different patterns. Hence, higher Dominance would foster a behavioral pattern of being self-motivated and self-directed, higher Influence would foster a behavioral pattern of friendliness and affability, higher Steadiness would foster a behavior of thoughtfulness and loyalty toward others, and higher Compliance would foster a behavior of complying not only to rules, policies, procedures, and laws governing organizational and civic entities but also to those that relate to one's personal creed and value system. Once successfully identified, the profiles have value for job seekers and employers in that the patterns of behavior are not conceived to be framed as positive or negative actions, but rather are products of a score higher in one or more DISC factors that needs to be effectively managed or that may require practice.

Limitations and future research directions

This study is limited by the use of cross-sectional, self-reported data. Future studies should utilize the ability of the DISCFlex assessment to ascertain third-party ratings to enhance data reliability, to provide valuable insights from others regarding one's own behavior, and to potentially clarify moderators for the diverse interactions between individuals (Denson and Chang, 2015; Donaldson and Grant-Vallone, 2002). A comprehensive discussion of meta-analytical studies recommended that self-ratings and ratings from others be obtained to reach statistical validities for dimensions that are comparable to other valid measures used in selection decisions (Ones et al., 2007). Yet even with such limitations, the abundance of respondents in this study who displayed elevated Steadiness suggests a lack of social desirability bias in the sample, as one could assert that given the extrovert ideal of the respondents' culture (Cain, 2013), a biased sample would report more Dominance and Influence.

Furthermore, future research should employ a longitudinal or repeated-measures approach to tracking individuals' DISC profiles over time, as a strength of DISC as a competency-based measure is that it allows individuals to adapt behaviors and modify them for various contexts. While Steadiness is still prominent in the graduate student sample, there was a statistically significant difference in Dominance between undergraduate and graduate students. Future researchers should investigate if anything moderates this relationship, or if those already elevated in Dominance simply decide to seek graduate degrees. Because graduate students are older and have more work experience, researchers should explore the factors that contribute to the Dominance competency to provide guidance to those working with younger individuals who are just embarking on their career paths.

Finally, it would be beneficial for academics and practitioners to work towards the adoption of a common nomenclature regarding the D, I, S, and C profiles. Firms changing the variable names based on their individual preferences does not impact the construct and content validity of the instrument, as the DISC letters basically direct respondents to the four quadrants. However, consistency in wording could further improve the communication of that validity. For example, when a practitioner refers to the C profile as conscientiousness (Scullard and Baum, 2015), doing so could lead respondents to think about the Big Five trait instead of a DISC profile task-focused introvert.

Conclusion

This paper offers two major contributions to the literature. First it introduces scholarly research on a behavioral based assessment, DISC, that has largely been overlooked in academia (Fertig and Milewicz, 2018; Forsyth et al., 2016; Jones and Hartley, 2013; Henkel and Wilmoth, 1992) but is widely used in practice. Second, it addresses an employment gap in the transition from academia to practice and offers a relatively simple solution to create a bridge between universities and employers. Employers continue to seek to hire individuals possessing strong soft skills (Davidson, 2016; NACE, 2019; Robles, 2012; Stewart et al., 2016) but continue to report a significant lack of applicants who can demonstrate these necessary skills (Dennison, 2018; Feffer, 2016; Rockwood, 2019; Rubin and Dierdorff, 2011). Students, on the other hand, believe they possess sufficient soft skill competencies to be effective on the job (Stewart et al., 2016), indicating that the disconnect between education and practice is still evident today. We propose that, by incorporating into academic research support for the use of the DISC assessment to develop college students' soft skills, the gap between education and practice may be narrowed.

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Footnotes

- 1 Countries in which 90% of talent professionals see soft skills as important include Mexico, Brazil, India, Italy, Southeast Asia, Spain, Canada, China, Middle East and North Africa, Argentina, Australia, the USA, and the UK. In Northern Europe, Netherlands, Germany and France, 80–89% rated soft skills as important.
- 2 Based on the Carnegie Classification of Institutions.
- 3 Additional information is available from Indaba Global on request.

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