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EMPLOYABILITY, CAREER ADAPTABILITY, AND FUTURE-ORIENTED EMOTIONAL RESPONSES TO WORK TRANSITION OF COLLEGE GRADUATING STUDENTS OF A PHILIPPINE HEI: POST COVID-19 STUDY

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ABSTRACT

This study explored the importance of Higher Education Institutions (HEI) by working closely with career counseling and guidance teams to develop programs that build students' confidence and resilience to mitigate anxiety and stress while preparing for their transition to the labor market in the post-COVID-19 economy. This study examined the effect of graduating student-level characteristics (GSLC), specifically employability skills and career adaptability behaviors, on the anticipatory emotions of college students transitioning from school to work. Data were collected through an online survey involving 754 students enrolled in internship courses in their final year of college. 44% reported feeling anxious about this transition, with 78% reporting anxiety at levels 5 to 8 on a 10-point scale. The GSLC model fit the data well, explaining 24.5% of the variance in anticipatory emotions, with four factors being significant predictors ($P < 0.05$). The findings revealed that students who feel less confident about their disciplinary expertise, career decidedness, and occupational self-efficacy are likely to report negative anticipatory emotions (anxiety), similar to students who are confident in their interpersonal skills. Student suggestions gathered from qualitative feedback corroborated the results, which offered ways to enhance school programs that prepared them for work. These results underscore the crucial role of HEIs in preparing students for employment, providing quality education, and offering sufficient mental health resources.

Keywords: **employability skills, career readiness, anticipatory emotions, school-to-work transition**

INTRODUCTION

The COVID-19 pandemic had a profound effect on the Philippines' higher education landscape. During its peak, the pandemic forced lockdowns, causing higher education institutions (HEIs) to adapt quickly despite being unprepared to conduct remote learning and online platforms (Castro, 2023). Philippine HEIs proactively implemented online learning policies and programs to avoid closures and respond to the needs of millions of students enrolled in thousands of collegiate schools (Education: From Disruption to Recovery, 2020; Joaquin et al., 2020). This shift to online learning compelled school administrators to use online platforms despite lacking in resources as well as students' and teachers' unpreparedness to engage in learning activities online (Reyes-Chua et al., 2020; Toquero, 2020).

Consequently, online education has significantly changed how students and educators interact and engage with academic content. The absence of students' face-to-face interactions with teachers and peers has impeded the learning experience and personal support that traditional classrooms provide. Even when governments begin to ease restrictions, schools delivered learning differently (Mok et al., 2021). Schools needed to adjust operations to comply with social distancing, which ultimately impacted students' learning, especially for students at the end or final term of degree completion. The period of COVID-19 pandemic significantly disrupted the preparation for their transition from school to work. Graduating students needed to adjust to a new learning modality, had limited access to practical training, and had reduced networking opportunities, which proved to be daunting challenges that graduating students faced during the pandemic.

School-to-work transition, or STWT, is when students move from school to enter the workforce and pursue productive livelihoods. This transition period typically occurs during the final year of college education and continues when students search for work until successful entry into the workforce. This transition (STWT) experience not only has a lasting impact on students' lives as they start to become socially and financially independent as members of the labor market, but also can be a challenging time for students as they face academic pressure, employment expectations, joblessness, social role changes, and life stress, making them vulnerable to stress and anxiety (Belle et al., 2022; Yang & Yang, 2022). Many students going through transition during the pandemic experienced health conditions such as anxiety, depression, and sleep disorders, among others, which affected their quality of life and academic performance (Yang & Yang, 2022).

The STWT is a lifelong learning process as learners adjust to challenging and unfamiliar work environments from a structured and predictable school environment (Pavlova et al., 2017). The ease or difficulty of STWT largely depends on the preparation of graduates, which is vital for how they start their careers. This significant change in students' lives is a critical juncture in which their preparedness and support from higher education institutions (HEI) play key roles. The outcome of this transition for the students allows us to evaluate the effectiveness of HEIs in fostering students' professional development and preparing them for work.

Role of Higher Education Institutions

Students seek comprehensive higher education to prepare for their desired careers in a specific field, foster personal development, and enhance their economic potential. The school provides a means to develop the graduate qualities demanded by the labor market to ensure employability through its curriculum and support programs. Higher education exposes students to relevant course content and allows for the in-depth study of specific fields to develop graduate employability, eventually leading to better job prospects and earnings. Graduate employability refers to a student's capacity to stay and thrive in the labor market, contribute to labor market outcomes, and adapt to changes in the industry and global economy (Sato et al., 2021). Education is valued because of its contribution to a person's socioeconomic well-being since a graduate is regarded to be better informed, make better decisions, and are better off financially because they get to be employed in better established work and careers (Ilies et al., 2019). The purpose of college education is to prepare students for professional work and careers based on the qualities demanded by

the labor market and to be resilient and proactive in managing early career experience and beyond (Sato et al., 2021; Tomlinson, 2017). Higher education is expected to create systems and programs that facilitate transition, allowing students to choose, be ready, and succeed in productive and rewarding roles in the workplace (Rogers et al. P., 2020).

Graduate quality, or how prepared students are for work after graduation, reflects the deep relationship and understanding between the school and industry. Therefore, graduates' employment and career success represent the quality of education HEIs provide students as a reflection of the quality of academic programs and the effectiveness of career guidance and counseling. In this context, probing the acquired employability skills and career readiness level would reveal how HEIs address deficiencies in these areas. Higher education institutions must take responsibility seriously by recognizing that these skills are central to producing quality workforce members (Mainga et al., 2022) and ensuring student health and well-being while preparing for STWT.

Higher education institutions need to reflect not only on the programs they implement to prepare students well but also on the impact on students' mental well-being, especially the quality of the program and how the school's demand for students to do well may compromise their well-being. In China, depression and anxiety have been reported to be prevalent among students as they move from school to work after graduation, all during the pandemic (Xu & Wang, 2022; Yang & Yang, 2022). A study in Bangladesh reported academic delays and worry about finding a job as a factor causing mental health threats among university graduate students (Ahmmed & Maria, 2020). In the Philippines, anxiety caused by the pandemic is aggravated by academic stress (Cleofas et al., 2023), as levels of depression and anxiety among public and private schools were reported (Joel Rey U Acob et al., 2021).

Moreover, labor and economic conditions in the post-pandemic period were reasons for graduating students to feel uneasy about their job prospects. Entry into the world of work was a challenge for new graduates since the lingering effect of the pandemic on the economy led to a career shock that affected their career goals and expectations (Tan et al., 2022). Economies are yet to recover from the crisis and may continue to dip towards 2023 and beyond due to an inflation-driven recession, leading to widespread workforce volatility and employment challenges (Tan et al., 2022; World Economic Forum, 2023). Moreover, the challenges of transition for college graduates in 2022 are also aggravated by the fact that they are the first generation of the new K-12 Basic Education program in the Philippines, and their last three years of education were all online due to restrictions of the pandemic. Lockdowns require faculty and students to adapt to disruptive changes and shift from traditional to online distance learning (Neuwirth et al., 2020). Poor economic forecasts and a degree from an entirely new mode of education may have resulted in poor estimates of employment success within the preferred industry.

Colleges and universities play a crucial and challenging role in teaching and training students to acquire the qualities demanded by the labor market, enhancing employability, and facilitating transitions to the workplace. However, these institutions must also consider the impact of their programs on students' mental well-being, particularly during a crisis. The need for campus administrators to plan and develop appropriate interventions for students (Khalid et al., 2023) underscores the role of higher institutions in society. The pandemic, for example, has led to increased anxiety and depression among students, exacerbated by academic stress and concerns about job prospects in a post-pandemic economy.

Recent studies on STWT and student future-oriented emotions towards this life event are scarce, particularly on the effect of graduating student employment attributes on employment anxiety (Belle et al., 2022; Parmentier et al., 2021). There is also limited research that address issues and concerns on graduate employment in the post-COVID-19 (García-Aracil et al., 2021; Mok et al., 2021), while recent studies on the same theme focused on the challenges of students' internships in work-from-home (WFH) arrangement during the lockdown period and how the experience influenced their perceptions of future employment (Hisham et al., 2020). Several papers have delved into factors affecting the mental health of students, including academic, future employment, and financial and personal background (Ahmmed & Maria, 2020; Yang & Yang, 2022). Moreover, previous studies found a significant

relationship between employability skills and career adaptability (Khalid & Ahmad, 2021; Tandiayuk et al., 2022).

The study was also guided by papers on the contribution of HEIs to the ease of transition and career success achieved by guiding graduates to craft their careers, particularly by building their career competencies and employability (Mok et al., 2021).

The study objective was (1) to establish graduate qualities for productive employment as indicators of readiness for work or graduating student-level characteristics (GSLC), (2) to know the students' future-oriented emotions on prospects for work and employment in the post-pandemic economy, and (3) test if graduating student level characteristics predict anticipatory emotions. This study posits that students' self-perception of their GSLC indicates the quality of preparation for STWT and affects or predicts anticipatory emotions towards STWT as future-oriented emotions. Graduating student-level characteristics (GSLC) indicate the quality of preparation for STWT and are attributed to the efforts and services of Higher Education Institutions (HEI). The study's results are intended to inform key stakeholders—from administrators to teachers and students—to be clear on their purpose and intentions to solve education issues in the post-pandemic era.

This study further provides a better understanding of how graduating student-level characteristics (GSLC), in terms of employability skills and career adaptability behavior, predict self-reported anticipatory emotions. The results are expected to inform school administrators on how schools performed their role during the pandemic in preparing students for graduate employment and how they can further improve programs to prepare students for work and careers. The study is significant in terms of how the results will help the school move forward in facing governance issues in the post-pandemic era (Mok et al., 2021; Presti et al., 2021).

LITERATURE REVIEW

The purpose of this literature review is to present the roles and importance of higher education, such as (1) the development of human capital, (2) providing a supportive environment to help students construct meaningful and personally aligned career paths, and (3) promoting and providing mental health resources for student well-being. In addition, the effect or influence of performing these roles by the school on the state of wellness and well-being of students should be deduced from the literature.

Employability Skills

Employability skills are the basic skills and competencies necessary to consider a graduate ready for a job, get hired, and perform productively in the workplace (Nasreen et al., 2022; Tandiayuk et al., 2022). Employability skills are essential for students to jump-start their careers and adapt to various work environment demands. Employability skills or career competencies refer to "possessing certain knowledge, skills, and abilities, and employability activities tap into the actual behaviors that improve people's chances of employment" (Presti et al., 2021). Awareness of skills and attributes may either boost student self-confidence or adjust the kind and trajectory of learning engagement for skill development, consequently improving success in applying for a job (García-Aracil et al., 2021). Strong perceived employability skills are more likely to approach the school-to-work transition positively and actively engage in career exploration and decision-making.

On the contrary, students who lack confidence in their employability skills may lead them to experience negative emotions such as anxiety. Challenges or failures easily discourage students who need more confidence about their capabilities (Bandura, 1991). School-related factors and perceived negative consequences are positively related to mental health issues and anxiety symptoms during the final years of higher education (Ahmmed & Maria, 2020; Belle et al., 2022).

The human capital theory posits that educating and training people is an investment that increases productivity, which can lead to higher earnings, increased productivity, job satisfaction, better health, and civic engagement. For

students, investing in skills development improves financial outcomes, health, and other benefits (Deming, 2022). The connection between higher education and human capital theory is fundamental because it explains how investments in education, including higher education, contribute to an individual's overall productive capacity, economic potential, and personal well-being. Higher education plays a vital role in society by providing students with expertise and opportunities to succeed in their careers and life (Becker, 1994; Ilies et al., 2019; Passaro et al., 2018; Sato et al., 2021; Tomlinson, 2017).

The main purpose of human capital development is to develop employability skills or essential abilities that individuals need to possess to prepare for a job, establish a career, and succeed (Tandiayuk et al., 2022). Employability refers to a student's ability to get employed and remain employable after graduation, which is critical to successful work integration (Masdonati et al., 202; Peeters et al., 2019). Higher education institutions are expected to develop skills and competencies for work and careers and prepare students to be ready by creating a supportive environment that helps them construct meaningful and personally aligned career paths. One recommendation from the literature is that higher education institutions should implement career development strategies in their curricula to help students identify meaningful development opportunities (Dumulescu et al., 2020). HEIs can benefit from career planning programs implementing interventions to enhance students' career proactivity (Chang et al., 2023). These strategies fall under the Career Construction Theory precept proposed by Savickas (2013), emphasizing that individuals are active authors of their careers, constructing their career identities and choices through self-reflection, exploration, and adaptation.

Career Adaptability Behavior

Career Adaptability Behavior refers to an individual's ability to effectively manage and adapt to changes in work and career that involve a set of behaviors, skills, and attitudes that enable individuals to navigate changing work conditions, acquire new knowledge and skills, and cope with career challenges (Fu et al., 2022; Haenggli & Hirschi, 2020). Career management skills and career development abilities predict early career success (Ghavifekr & Radwan, 2021). According to Masdonati et al. (2021), career adaptability is divided into four dimensions: "concern about one's vocational future, perceived control over the shaping of one's future career, curiosity about the self and career opportunities, and confidence in one's capacity to overcome vocational barriers ."These four characteristics are present among workers with high levels of career adaptability' (Parmentier et al., 2022) and positively related to career planning, career exploration, and occupational and career decision-making self-efficacy (Rudolph et al., 2017). Career adaptability and competencies predict life satisfaction and academic performance (Paradnike & Akkermans, 2017). Career Adaptability behaviors, such as career decidedness and adaptability, predicted positive and negative anticipatory emotions toward transitions (Parmentier et al., 2021).

Another way to look at career development for guidance and counseling is the Protean Career theory, which proposes that individuals (students) need to develop adaptability and take charge of their careers in response to evolving work environments and personal goals. The protean career orientation is “associated with personal qualities such as proactivity, openness to change, optimism, and adaptability," which later evolved into two careers' ''meta competencies'' adaptability and identity (or self-awareness) (Hall, 2004; Waters et al., 2014). Schools are expected to teach and develop adaptive behaviors as lifelong learning skills. Career planning and career exploration are behaviors that point to the capacity of students to adapt to perform career development tasks and adjust to work and career conditions (Hirschi et al., 2015).

Although the preceding discussion implies an absolute contribution of education to the benefits of human capital development, there are arguments to the contrary. Marginson (2019) argues that "higher education and work are different and separated social sites though there are important overlaps in practice" and "is not a relationship of identity, regularity or a linear continuum," implying that a successful career is not guaranteed after higher education or human capital development is not a guarantee of success. The same premise is observed in a study by Chinonso et al. (2020), reporting that many college graduates must prepare for work, particularly in developing countries. This observation proves that more than a college education is needed to guarantee employment skills, good jobs, and

better lives.

Anticipatory Emotions

Future-oriented emotions are affective reactions to events that can motivate future behavior and influence goal-directed behavior through their influence on behavioral intentions (Baumgartner et al., 2008; Gillman et al., 2023). Inquiry into what drives future-oriented emotions in higher education is necessary for schools to know how to engage and make students perform better (Pawlak & Moustafa, 2023). One of the two distinct future-oriented emotions is anticipatory emotion, referred to as an emotion experienced simultaneously at present and by thinking of an event possibly occurring in the future, which, in any case, may result in either positive or negative emotion (Gillman et al., 2023; Parmentier et al., 2021). Anticipatory emotions towards work, the study's dependent variable, are "immediate reactions to risks and uncertainties that represent real affective experiences at the prospect of desirable and undesirable scenarios in (future) work" (Loewenstein et al., 2001; Parmentier et al., 2022; Wang et al., 2022).

The concerns about not being prepared for the demands of a job, not being able to handle the stress of a job, not being able to fit in with co-workers, and its consequences to life and career are legitimate concerns on "the potential for graduates to gain initial employment, maintain employment and obtain new employment if required, based on available alternatives in the labor market" (Tan et al., 2022) or simply graduate employability. These concerns may manifest during the transition from school to work when students are still under the care of the school. This transition phase plays a critical period in the lifelong learning process for all learners and is a challenge for students to prepare for (Pavlova et al., 2017). Unprepared entry into the world of work compromises long-term career success (Presti et al., 2021).

In summary, the preceding review focused on the role of higher education in developing human capital and its capacity to increase productivity, earnings, job satisfaction, health, and civic engagement of its graduates. Second, the emphasis was on providing a supportive environment for students to construct meaningful career paths and align them with their personal goals. Lastly, there was a mention of the promotion and provision of mental health resources for student well-being, ensuring successful career outcomes during the completion of higher education. This review underscores the significance of student transition from school to work and its potential impact on long-term career success.

Theoretical Framework and Hypotheses

This study viewed the connection between higher education and career theories and their effects on student wellness and well-being in two ways. First, it explored the contribution of higher education to the school-to-work transition process by considering students' perceptions of their learning (García-Aracil et al., 2021). These perceptions of learning outcomes, employability skills, and career behaviors are variables of interest that may impair students' mental health (Belle et al., 2022). For this study, a single set of independent variables points to graduating student-level characteristics (GSLC), or the qualities or attributes expected or desired by students about to graduate from college or higher education at a certain level. The GSLC construct is divided into two domains: employability and career adaptability. See Figure 1.

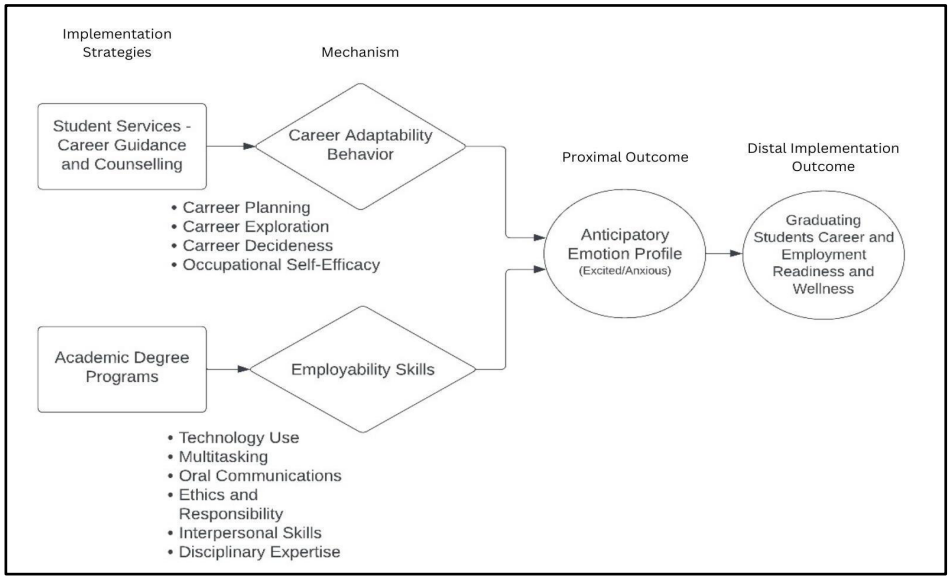
Second, it explores how higher education institutions can align their programs and policies with the principles of these theories. The challenge is how education administration can effectively draw insights into developing career and guidance programs founded on these theories for more effective student service. Higher education institutions are responsible for promoting student well-being because they are best positioned to deliver prevention programs to manage students' mental health issues (Werner-Seidler et al., 2021).

The framework considers building causal pathway models to depict the relationships between variables and outcomes as fundamental components of the implementation theory. This study uses the concept of implementation science to present the structure of causal relationships and empirically examine whether

implementation strategies work as expected, how contextual factors influence the implementation process, and the extent to which theorized mechanisms explain the variation in outcomes (Lewis et al., 2018). This approach is deemed critical because the study aims to assess and improve HEI programs that support students undergoing STWT. The study is particularly interested in the contribution of academic degree programs to developing student employability skills and career guidance and counseling and how it helped students develop career adaptability behavior that will help them successfully transition to work.

This study provides practical information to guide school administrators in developing a preventive strategy to address negative anticipatory emotions toward school-to-work transition to mitigate its impact on students (Parmentier et al., 2022). This information is based on what the anticipatory emotion data would present about students' mental health and wellness during the pre-transition period. The results provide insights into the effectiveness of the strategies employed based on the implementation outcome, in what areas the HEI is strong, and in what areas need improvement. See Figure 1.

Figure 1
Causal Model - Effects of Graduating Level Characteristics on Anticipatory Emotions



Study Hypothesis
This study investigated students' anticipatory emotions based on their (personal) assessment of graduating student-level characteristics. It is premised that college students usually experience anxiety, including learning and anticipation of work and career success before graduation. The hypotheses of this study are as follows.

Ho_1	Technology use significantly predicts anticipatory emotions (excited vs anxious) towards STWT.
Ho_2	Multitasking significantly predicts anticipatory emotions (excited vs anxious) towards STWT.
Ho_3	Communication skills significantly predict anticipatory emotions (excited vs anxious) towards STWT.

Ho_4	Ethics and responsibility significantly predict anticipatory emotions (excited vs anxious) towards STWT.
Ho_5	Interpersonal skills significantly predict anticipatory emotions (excited vs anxious) towards STWT.
Ho_6	Disciplinary expertise significantly predicts anticipatory emotions (excited vs anxious) towards STWT.
Ho_7	Career planning significantly predicts anticipatory emotions (excited vs anxious) towards STWT.
Ho_8	Career decidedness significantly predicts anticipatory emotions (excited vs. anxious) towards STWT.
Ho_9	Career exploration significantly predicts anticipatory emotions (excited vs anxious) towards STWT.
Ho_{10}	Occupational self-efficacy significantly predicts anticipatory emotions (excited vs anxious) towards STWT.

METHODOLOGY

Research Design

The study's design is causal and predictive based on the assumption that acquired college graduating student-level characteristics (CGSLC), particularly employability skills and career adaptability behaviors, affect college graduating students' future-oriented emotions.

Population and Sampling

The study focused on graduating students' experience from an HEI in the Philippines that took advantage of the pandemic to fully operate and execute learning in a digital space. The HEI was an early technology adopter that began in 2017 by adopting blended learning through a learning management system.

The study used data collected in June 2022 through an online survey administered to students enrolled in internship courses under their respective programs and in the final semester of their bachelor's degree programs. The study targeted to seek responses from all qualified students adopting a homogenous convenience sampling approach to provide clearer generalizability of results (Jager et al., 2017).

Instrument

The study instrument comprised 34 items with two domains and ten subscales (see Table 1). The items were used to measure self-efficacy or confidence in performing skills and competencies on a six-point Likert scale from 1 = Totally Sure I cannot/I am not; 2 = I cannot/I am not; 3 = Somewhat I cannot/I am not; 4 = Somewhat I can/I am; 5 = I can/I am; and 6 = Totally Sure I can/I am. Responses were students' self-assessments of their employability skills and career adaptive behaviors as a reflection of (a) their readiness to STWT and (2) how the school was able to prepare them for work, expressed as confidence or self-efficacy. This study considers the value of understanding students' perceptions of their learning and emerges as a relevant variable to study (García-Aracil et al., 2021) if higher education aims to help students develop skills and competencies for work. Self-efficacy is an important component which affects academic and work performance (Xin et al., 2020).

This study developed items from the literature that measure employability skills and career adaptability constructs. The instrument profiles four areas of the graduate capability model of employability from the work of Hinchliffe and

Jolly (2011) with 47 statements of graduate potential and grouped by expectations of graduate performance, resulting in statements of acceptable employability skills, competencies, attributes, and personal qualities. The statements were further categorized into two types of skills (hard and soft) and six graduate competencies (see Table 1) from the work of Castro (2014) that assessed students' acquired skills and competencies based on the feedback of the immediate head/supervisor of the student trainee.

Four areas under the career adaptability behavior were explored (see Table 1) to identify adapting responses or behaviors to address career development tasks and changing work and career conditions from the work of Hirschi et al. (2015). The authors suggested treating career adaptability behavior as a multi-dimensional construct.

Anticipatory emotions were measured in terms of students' responses to how they felt about their transition from school to work by choosing between (1) anxious and (2) excited. Students who chose "anxious" were further asked, "How anxious or worried are you about your transitioning from school to work?" and were asked to describe their level of anxiety by choosing values ranging from 1 (not anxious at all) to 10 (very anxious). An open-ended question, 'In what ways do you think the school can improve to prepare students for work and career?' was asked to gather suggestions on improving HEI programs to prepare students for STWT.

Table 1

Graduating Student-level Characteristics

Employability Skills Subscales	Items	(Hinchliffe & Jolly, 2011)	(E. A. G. Castro, 2014)	Career Adaptability Behavior Subscales	Items	Reference
Technology Use	3		Hard Skill	Career Planning	5	
Multitasking	1	Performance	Hard Skill	Career Decidedness	3	
Communications	3		Hard Skill	Career Explore	5	(Hirschi et al. 2015)
Ethics and Responsibility	3	Values	Soft Skill	Occupational Self Efficacy	5	
Interpersonal Skills	2	Engagement	Soft Skill			
Disciplinary Expertise	3	Intellect	Hard Skill			

Data Analysis

The GSLC construct was validated using confirmatory analysis. An independent samples t-test highlighted differences in students' responses reporting their anticipatory emotions towards the STWT (excitement vs. anxiety). Effect sizes using Cohen's d, were used to support the reported p-value and to provide information on the magnitude or strength of the findings (Durlak, 2009). For the empirical part of this study, binomial logistic regression was used to determine the predictive value of all GSLC factors for anticipatory emotion. Open-ended responses were analyzed and summarized using Grounding AI, a machine learning process linking abstract knowledge in AI systems to tangible, real-world examples (responses). This process enhances an AI's ability to produce better predictions and responses using specific, contextually relevant information (Grounding AI: How to Improve AI Decision-Making with Contextual Awareness, n.d.).

Ethical Considerations

The proponent administered an online survey to the students using an informed consent letter via Google Forms. Students were asked to answer the survey with the option not to divulge their names and were instructed to take time to decide to participate. The informed consent form further informed the respondents that no personal benefits are provided but that it may help the institution in ways that the administration can make informed decisions based on the information from the study. Participation in the survey posed no risk, harm, discomfort, or inconvenience. The researcher ensured that all information to meet standards for informed consent was available to respondents.

RESULTS AND DISCUSSION

Eight hundred thirty (n = 830) of 1,140 graduating students in 2022, or 72%, responded to the survey. Seven hundred and fifty-four (n = 754) remained after data cleaning. Among the respondents, 60% were female (n = 453), 39% were male (n = 294), and 0.4% declared that they were binary (n = 3) while 0.5% (n = 4) preferred not to disclose their sex. 73% of respondents, which made up the majority, were from programs with no professional board or licensure exams (n = 548), while the remaining 27% had professional board exams (n = 206). The percentage of students who reported anxiety was 44% (n = 330), while the majority of 56% reported excitement towards the transition from school to work (n = 424). Almost the same distribution of anticipatory emotions was observed when students were grouped according to program type.

The majority amounting to 78% (n = 257), reported feeling anxious and scored anxiety levels of 5–8 from the scoring scale of 1–10 when asked about their future work. At the same time, 12% (n = 40) of students reported anxiety at levels 9–10.

The hypothesized ten-factor model structure was proven valid after a confirmatory factor analysis, with all fit indices meeting recommended standards (Hu & Bentler, 1999). The chi-square test results were statistically significant ($p < 0.001$) with $\chi 2 = 1265$, df = 451, and n=754. The comparative fit index CFI=0.95, Tucker-Lewis index TLI=0.94, and root-mean-square error of approximation RMSEA=0.0458 were <0.06, indicating that the model fit the data well.

Descriptive Statistics

Table 2 presents the final subscale statistics for the 10-factor model of factors affecting anticipatory emotions towards STWT. Reliability test results showed good scores ranging from Cronbach's alpha to 0.74 to 0.88. Among the subscales of employability skills, multitasking had the lowest mean response score at 5.04. In contrast, ethics and responsibility had the highest mean response score at 5.56, with six having the highest possible score. In the career adaptability behavior domain, the subscale with the lowest mean response score was not only on the respective domain but also among all subscales was career decidedness at 5.02. At the same time, career planning had the highest mean response score in the domain of 5.43.

Table 2

Subscale statistics and Independent T-test for the 10-factor Model of Factors Affecting Anticipatory Emotions towards the STWT

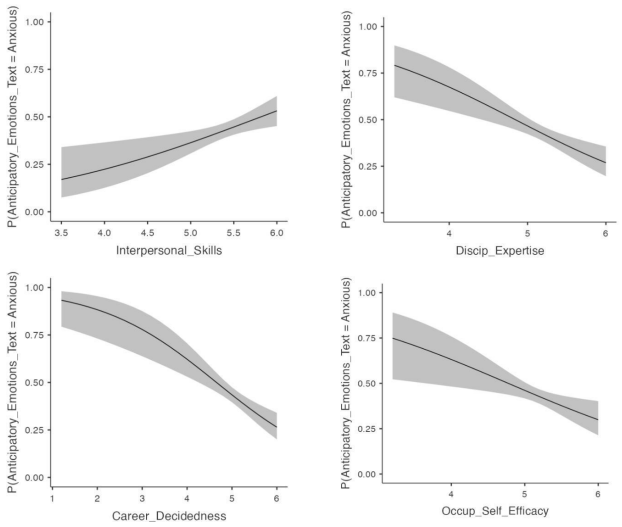
		Descriptive (N= 754)		Independent Samples T-Test			
	Alpha	Mean	SD	Statistic	p	Effect Size (Cohen's d)	
Ethical responsibility	0.85	5.56	0.51	-1.16	0.248	-0.08	Small
Interpersonal skills	0.81	5.41	0.561	-2.43	0.015	-0.18	Small

Technology use	0.74	5.17	0.594	-3.43	< .001	-0.25	Medium
Disciplinary expertise	0.86	5.16	0.592	-7.95	< .001	-0.58	Large
Communications	0.81	5.06	0.624	-4.75	< .001	-0.35	Medium
Multitasking		5.04	0.786	-4.16	< .001	-0.31	Medium
Career planning	0.85	5.43	0.515	-7.34	< .001	-0.54	Large
Career exploration	0.87	5.25	0.558	-8.78	< .001	-0.64	Large
Occupational self-efficacy	0.87	5.17	0.565	-9.52	< .001	-0.70	Large
Career decidedness	0.88	5.02	0.78	-10.84	< .001	-0.80	Large

The table also shows that all subscale scores, except for ethics responsibility, were statistically different when grouped according to anticipatory emotions: those who expressed excitement versus those who expressed anxiety. Responses from those reporting anxiety were statistically lower, with effect sizes ranging from small to large in the employability skill domain. The same observation was made for the career adaptability behavior domain subscales, with all subscales having large effect sizes. The subscales with the largest effect sizes were occupational self-efficacy and career decision-making.

Binomial logistic regression was used to investigate the unique contribution of the independent variables - Employability Skills and Career Adaptability Behavior subscales–in predicting self-reported anticipatory emotions towards school-to-work transition (STWT). The emotions were either anxious (0) or excited (1). The overall model was significant, $\chi 2$ (10) = 152, p < .001, and the results indicated that the variance in the odds of anticipatory emotion was explained by 18.3% (Cox and Snell's R^2) to 24.5% (Nagelkerke's R^2) of the predictor set. Among the outcome categories, 69.4% of cases were accurately classified. Four factors were statistically significant predictors of "anxiety" anticipatory emotions (Figure 2).

Figure 2
Estimated Marginal Means of Significant Predictors of STWT Anticipatory Emotions (excited versus anxious)



The results show the impact of the level of *disciplinary expertise* or practical and theoretical content knowledge within a specific field of study from the degree that college students pursue on their perceptions of their preparedness for work (García-Aracil et al., 2021). Reporting anxiety was less likely for every one-unit increase in the disciplinary expertise subscales, with an estimated -0.87 odds ratio = 0.421. Students who are more confident about their knowledge and expertise are more likely to report excitement about their work. In contrast, students with low levels of confidence in their disciplinary expertise were more likely to report anxiety. They may experience stress knowing their ability to perform future work tasks within their field, which could lead to negative anticipation. Limitations or gaps in the academic training were reported suggesting the existence of discrepancies between graduates' expectations and training (Cherniak et al., 2019). Alignment of post-graduate qualifications with job market requirements can lead to positive anticipatory emotions (Du Toit & Koorsen, 2022). The results support the importance of building career competencies, as previous studies have shown that graduates must develop career competencies during the school-to-work transition (Presti et al., 2021).

Career decision-making self-efficacy refers to students' belief in their ability to complete tasks related to career decision-making. The results showed that students exhibiting career decidedness were less likely to report anxiety (estimate = -0.76, odds ratio = 0.467). Graduating students with lower confidence in career decision-making may face employment challenges or pick the wrong career, compromising long-term success and sustainable careers (Xin et al., 2020). Students with high career decision-making self-efficacy have positive anticipation since their career goals are clear which contributes to more effective job adaptation (Lu & Jia, 2022) Thirdly, they should prepare for their career by clarifying what kind of job they want to do, when they want to do, and how to do. Otherwise, doubting their ability to make successful career decisions can result in negative anticipatory emotions such as anxiety and fear.

Occupational self-efficacy refers to confidence to perform tasks and meet challenges in their chosen profession (Peng et al., 2021). Occupational self-efficacy includes the ability to handle job-specific tasks, solve work-related problems, and adapt to changes in the workplace. The results show that occupational self-efficacy can significantly influence anticipatory emotions and suggest that students exhibiting low occupational self-efficacy (estimate = -0.69, odds ratio = 0.50) are more likely to report anxiety. High occupational self-efficacy can lead to positive anticipatory emotions such as excitement and confidence in job-related tasks, while low occupational self-efficacy can result in anxiety and apprehension.

As indicated by the odds ratios, students were 1.98 times more likely to report anxiety towards STWT for every one-unit increase in interpersonal skills subscale (estimate = 0.69, odds ratio = 1.983). Contrary to the popular belief that *interpersonal skills* add value to employability skills, which can lead to more positive outcomes, the result suggests otherwise. The results suggest that students who believe that they have the interpersonal skills needed in the workplace are more likely to report experiences of negative anticipatory emotions, such as anxiety and fear. The results support the findings that individuals with more extroverted and open personalities have experienced greater declines in mental health during the pandemic (De Neve, 2021). Being nice is a characteristic of individuals with interpersonal skills; however, its downside is that these individuals are more prone to depression, as they are more likely to experience extreme empathy, guilt, and stress (Hong, 2019). "People-person," a description of individuals who are typically extroverted and thrive on social interactions (Nur_Ilham_Ismail, 2023), draw energy and happiness from their interactions that make them more vulnerable to emotional exhaustion, stress, or feelings of rejection leading to anxiety, depression, or other mental health concerns.

Students' Suggestions to Improve Programs for STWT

Out of 754 responses, 144 were unique responses to the open-ended question "In what ways do you think the school can improve to prepare students for work and career?" were extracted from the data using an artificial intelligence (AI) application software using natural language processing to create detailed responses (information).

In summary, students expressed several reasons for feeling anxious about transitioning from school to work. These include a perceived lack of real-world experience and exposure, insufficient career support and guidance, enhanced learning and teaching quality, and face-to-face instruction. Due to the pandemic, the shift to online learning has amplified some of these concerns. Additionally, general uncertainty about the future, including finding a job, adapting to a new environment, and achieving financial stability, adds to this anxiety. This study provides five thematic suggestions.

Seminars and Training: Students suggested more seminars, workshops, career talks, and training programs. They believed in additional educational events, particularly those related to specific courses or broader career opportunities. Students suggested that these activities provide them with a deeper understanding of their fields, expose them to industry experts, and allow them to gain practical skills that significantly improve their readiness for the work environment and benefit their future careers. Sample responses reflect the clamor for more activities to enhance their readiness for work; "More seminars and training." "Having career day, perhaps?", "Have more seminars."

Real-world Experience and Exposure: Students suggested more practical tasks, on-site internships, on-the-job training (OJTs), community involvement, and more exposure to the actual work environment. Students emphasized the importance of experiencing real-world settings that they would encounter in their future careers. Being involved in actual work situations, being exposed to industrial practices, and dealing with real-life challenges can better prepare students for what lies ahead. Internships are useful for strengthening the link between academia and industry and are valued by graduates (Tomlinson, 2017). The following are sample responses: "I think school can help the students improve their skills and talents by providing more exercise that will focus on the student's skills." "Help them find good companies that can accommodate their OJT experience.", "The school should offer a Face-to-face Career Choice Event for fresh graduates who can easily apply for a job."

Enhanced Learning and Teaching Quality: Students suggested more interactive learning, project-based learning, improved review classes, and a greater focus on synchronous classes and real-world projects. Students felt that the quality of teaching and methods significantly affected their preparedness for work and careers. The school could incorporate innovative teaching methods, such as project-based learning, and integrate real-world projects into its curriculum. They also expressed the need for improved review classes and a greater focus on synchronous learning. See the following for sample responses. "The experiences that the school gave the students help a lot.", "Arming students with strong critical thinking skills," "More interactive learning methods than reading from the textbook." "Out-of-the-box learning ways."

Career Support and Guidance: This includes suggestions for more career counseling, mock job interviews, job fairs, and partnerships with companies for employment opportunities. Students also suggested the implementation of a career choice event for new graduates. They expressed the need for more support and guidance in their career paths, especially as they transitioned from being students to becoming a part of the workforce. Schools can play a significant role by providing necessary resources, opportunities, and advice. The following are sample responses: "Teach students how to get a job (dress, interview technique, important documents, what makes a good resumé, etc.)." "Have face-to-face classes back," "Job Fair."

Face-to-face Instructions: This category includes responses suggesting the return of face-to-face classes, especially for laboratory and engineering classes and on-the-job training. Students expressed a strong desire for in-person interactions, believing that they could better prepare for future careers. They argued that some aspects of learning, especially those that require hands-on experience, are best achieved through face-to-face instruction. They also expressed the need for safety measures to be implemented to ensure the health and safety of everyone involved. See the following for sample responses. "Bring back face-to-face classes." "prioritize face-to-face OJT," "In addition to teaching academics, it is also essential to teach life skills to students, in my opinion."

CONCLUSION AND RECOMMENDATIONS

Among the ten subscales of graduating student-level characteristics, this study concludes that students are likelier to report negative anticipatory emotions (anxiety) when they feel less confident about their disciplinary expertise, career decidedness, and occupational self-efficacy. However, they also tended to report negative anticipatory emotions even when they reported confidence in their interpersonal skills. See Table 2 for Summary Results.

The empirical results align with the summary of students' responses that they feel anxious about transitioning from school to work because of a perceived lack of real-world experience, insufficient career guidance, the need for better teaching quality, and a lack of face-to-face instruction. Incidentally, these are the primary roles that HEIs need to perform and are responsible for ensuring students' mental health and well-being.

Table 3
Summary Results of Binomial Regression Test

Ho_1	Technology use significantly predicts anticipatory emotions (excited vs anxious) towards SWT (excited vs anxious).	Not supported
Ho_2	Multitasking significantly predicts anticipatory emotions (excited vs anxious) towards SWT (excited vs anxious).	Not supported
Ho_3	Communication skills significantly predict anticipatory emotions (excited vs anxious) towards SWT (excited vs anxious).	Not supported
Ho_4	Ethics and responsibility significantly predict anticipatory emotions (excited vs anxious) towards SWT (excited vs anxious).	Not supported
Ho_5	Interpersonal skills significantly predict anticipatory emotions (excited vs anxious) towards SWT (excited vs anxious).	Supported
Ho_6	Disciplinary expertise significantly predicts anticipatory emotions (excited vs anxious) towards SWT (excited vs anxious).	Supported
Ho_7	Career planning significantly predicts anticipatory emotions (excited vs anxious) towards SWT (excited vs anxious).	Not supported
Ho_8	Career decidedness significantly predicts anticipatory emotions (excited vs. anxious) towards SWT (excited vs. anxious)., career exploration, and occupational self-efficacy.	Supported
Ho_9	Career exploration significantly predicts anticipatory emotions (excited vs anxious) towards SWT.	Not supported
Ho_{10}	Occupational self-efficacy significantly predicts anticipatory emotions (excited vs anxious) toward SWT.	Supported

HEIs are expected to teach, train, and develop students' employability skills as human capital to transition and successfully participate in the work world by including not only the skills necessary but also mechanisms to develop these skills through curriculum and co-curriculum design (Nasreen et al., 2022). HEIs need to develop and sustain a diversified program that combines classroom training in a real-world context, internship/on-the-job work experience, career guidance, job search assistance, counseling and life skills training, and entrepreneurship (Alam

& de Diego, 2019). During the preparation phase, HEIs need to ensure that they have quality teaching and learning programs to make students confident of their knowledge in the field and the skills and competencies they are developing for employment. As curriculum designers, academic administrators must work with career guidance service teams to develop programs to help their students recognize their skills and what needs to be developed for their success in the workplace (Presti et al., 2021). Higher education institutions are responsible for providing high-quality education, as it significantly impacts students' prospects and personal growth, leads to better job opportunities, equips students with critical skills for changing job markets, and contributes to personal growth. Studies suggest that probing students' needs by profiling and targeting specific needs and providing individualized guidance and monitoring increases their academic engagement and performance (Alam & de Diego, 2019; Pawlak & Moustafa, 2023).

Moreover, initiatives for quality education should be part of HEI programs to promote and provide mental health resources for student well-being. Although this is a non-curricular issue, making students confident about their college education makes them resistant to negative anticipatory emotions, thereby avoiding feelings of anxiety and stress. Students confident in their skills and competencies consider themselves better prepared for entry into the workforce (García-Aracil et al., 2021).

However, quality education is not the only way to ensure students are provided with resources for mental health. Career guidance and counseling are vital during STWT. Higher education institutions need to sustain programs to help students understand their skills, interests, and values and guide them in preparing for their career paths. These programs provide information about different professions, assist in setting realistic career goals, develop job search skills, prepare for interviews, and cope with the challenges and stressors of the transition. These programs boost students' confidence, contribute to a more positive outlook on their future work, and relieve their anxiety and stress. In essence, institutions of higher education in the post-pandemic era are tasked with developing more rigorous programs as suggested by the construct of career adaptability and supporting the program with psychological resources to help students cope with change as they transition to the labor market (Fuertes et al., 2021).
Limitations and areas for future research. The test result shows that academic and academic support factors as predictors explained the variance in the outcome variable (anticipatory emotions) as significant at 24.5%, Nagelkerke's R^2. This result implies that other factors can fully explain the conditions that affect the anticipatory emotions of students in the transition from school to work (Ahmmed & Maria, 2020). Therefore, further studies are warranted.

Anxiety data were self-reported, self-assessed anxiety, which refers to the level of anxiety the students say they were experiencing during data collection, measured on a scale of 1-10. This study did not use standardized instruments to identify or measure anxiety.

The study concentrated on the responses of graduating students from an HEI; thus, the results may greatly help the institution and others who share the same circumstances, but this may only be true for some HEIs. Further research on other HEIs is required. Future studies should replicate and validate these results.

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