مركز آراء للاستشارات والدراسات
Araa Consultancy and Studies

Tool Development of:

Self-Discovery & Academic Compass Toolkit (SDACT)

AI Powered Ecosystem Designed Platform to Support Youth to Navigate Future Choices with Insight

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Abstract

This study presents the development and validation of the Self-Discovery & Academic Compass Toolkit (SDACT), an AI-powered ecosystem designed to guide youth aged 16–24 in making informed academic, personal, and career decisions aligned with emerging global trends. Over a decade of scientific work, culminating in the final two years of intensive development, the SDACT was built through a three-phase process: global benchmarking, comparative analysis of established tools, and composition of a locally relevant, internationally aligned toolkit. SDACT integrates components such as vocational preference mapping, psychological well-being assessment, hobby and influence analysis, and an adaptive AI mentor platform. Uniquely, it bridges traditional vocational psychology with future-specialty coverage, aligning with frameworks such as the UN Sustainable Development Goals, OECD Learning Compass, and the WEF Future of Jobs Report. The toolkit was evaluated on a sample of 324 participants, demonstrating excellent internal consistency with an overall Cronbach's alpha of 0.93. Comparative analysis against seven international tools positioned SDACT as a next-generation platform, superior in AI integration, cultural customization, and future-readiness. This study positions SDACT as a pioneering solution in the field of youth development, offering actionable insights for individuals, families, educators, and policymakers to foster resilient, future-oriented educational and vocational pathways.

Introduction:

Empowering the aspirations and potential of future generations is not just important—it is foundational to long-term societal resilience and sustainable development. Youth aged 16 to 24 form a vital segment of society, capable of driving innovation, leadership, and transformation. In our increasingly multicultural and multilingual world, this generation embodies rich diversity in identity, background, and expression. These realities demand inclusive, culturally attuned, and technologically advanced solutions to help young people understand themselves and navigate their academic, personal, and professional journeys with clarity and confidence.

Over more than a decade, the scientific team behind this initiative has contributed to a wide range of peer-reviewed research (see ARAA Portfolio). This extensive experience culminated in the creation of the Self-Discovery & Academic Compass Toolkit (SDACT)—a rigorous, evidence-based solution.

Tailored for youth aged 16 to 24, SDACT is a structured and dynamic toolkit that fosters self-awareness through personalized exploration of academic interests, personality traits, hobbies, and influential life factors. It goes beyond assessment—serving as a strategic compass that guides youth through today's complex and competitive landscape.

At ARAA Consultancy & Studies, we transform insights into actionable outcomes. SDACT is delivered through a cutting-edge AI-Powered Ecosystem Platform, which personalizes, enhances, and sustains each user's developmental journey. By integrating structured indicators, data-driven insights, and targeted interventions, the platform equips families, advisors, and policymakers to make well-informed, future-aligned decisions.

SDACT is not just a tool, it represents a transformative shift in how we support young people in understanding themselves and preparing for the future. It is an evolved and expanded version of the Emirates Scale for Vocational Interest (ESVI) (Alnajjar, A., 2020), offering an essential contribution to the knowledge base required for effective vocational guidance and career exploration within educational settings.

The SDACT Construction Journey

SDACT is the culmination of a decade of dedicated work, with the final two years focused intensively on refining its structure. The toolkit was developed through a rigorous three-phase process that ensured both scientific depth and practical relevance.

PHASE ONE: Global Review and Benchmarking

The development of SDACT began with a comprehensive review of international literature and the methodologies of world-leading institutions in the fields of vocational psychology, youth development, and academic guidance. This phase focused on identifying global trends, theoretical foundations, and successful models used in career assessment and psychological profiling, aligning with frameworks such as the UN SDGs, OECD Skills Outlook, and WEF Future of Jobs Report.

PHASE TWO: Comparative Analysis and Innovation

Building on the insights gained, the team systematically analyzed established vocational and psychological assessment tools (such as KOIS, Holland's RIASEC, YouScience, and others). Key psychometric and practical features were compared, including AI integration, customizability, feedback mechanisms, and future readiness. This led to the creation of a unique, locally grounded tool that reflects the UAE's future workforce needs while maintaining international relevance.

PHASE THREE: SDACT Toolkit Composition

This phase involved the actual design and development of the Self-Discovery & Academic Compass Toolkit, integrating the following core components:

- Vocational Preferences and Future Domain Mapping: Aligns individual interests with 18 future-oriented domains and over 100 subdomains
- Psychological Well-being and Personality Profiling: Measures self-awareness, resilience, and key personality traits that affect academic and career decision-making.
- Hobbies and Life Influences Analysis: Captures passions and influential factors to enrich guidance personalization.
- AI-Driven Mentor System: Provides instant, adaptive support for academic, personal, and career challenges based on user data.
- Insightful Reporting: Generates customized reports for youth, families, consultants, and universities, facilitating targeted development and planning.

PHASE ONE: Global Benchmarking of Future-Oriented Competency Frameworks and Academic Tools

Future Specialties Coverage has emerged as a critical dimension in modern academic orientation. While most psychometric and career guidance tools effectively assess psychological, personality, and interest-related dimensions, they often lack direct alignment with rapidly evolving global labor market demands.

To bridge this gap, the SDACT team conducted a comprehensive review of leading international frameworks, policy documents, and institutional reports. This effort ensures SDACT's design is grounded in future competencies, sustainability, and digital transformation. Below are three core global references that guided our alignment:

1. World Economic Forum – Future of Jobs Report (2023)

The WEF provides strategic foresight into emerging roles, technological shifts, and evolving skills across global industries. The 2023 edition highlights key themes such as AI disruption, green transitions, and rising demand for analytical and cognitive capabilities. Careers such as AI specialists, data analysts, and sustainability consultants top the projected growth list. SDACT's domain structure, including tracks in AI, sustainability, and smart manufacturing, directly mirrors these trends, offering future-proof guidance to youth.

2. United Nations Sustainable Development Goals (SDGs)

Adopted in 2015, the 17 SDGs form a global agenda for inclusive and sustainable development. SDACT particularly addresses:

- SDG 4: Quality Education, by fostering informed academic and vocational decisions.
- SDG 8: Decent Work and Economic Growth by promoting youth employability and entrepreneurship.
- SDG 9 & 13: Innovation and Climate Action, by encouraging careers in emerging, sustainable technologies.
- SDACT's methodology empowers students to pursue responsible, resilient, and opportunity-rich career paths.

3. OECD Learning Compass 2030 – Skills for the Future

The OECD framework emphasizes adaptability, global competence, digital literacy, and student agency. It advocates for education that fosters not only academic knowledge but also values, attitudes, and skills for lifelong learning. SDACT is aligned with these priorities by helping students discover their strengths and align their pathways with interdisciplinary and future-centric skillsets.

Iinternational associations framworks used to read rising future profitionalities:

Institute	Report	Reference
The World Economic Forum's Future of Jobs Report	Future of Jobs Report	https://www3.weforum.org/docs/WEF_Future_of_Jobs_2023.pdf
United Nations Sustainable Development Goals (SDGs)	The 17 Sustainable Development Goals (SDGs)	Transforming_Our_World:_The_2030_Agenda (PDF)
OECD Learning Compass 2030: Skills for 2030 Framework	The OECD's Skills for 2030 vision	https://www3.weforum.org/docs/WEF_Future_of_Jobs_2023.pdf

This benchmarking phase reinforces SDACT's mission to offer a next-generation academic and vocational guidance toolkit. It connects local student needs with global transformation trends, enabling individuals, and the systems that support them, to prepare for a dynamic, skill-based future.

Identifying Future Specialties: Bridging the Gaps in Emerging Domains

In our comprehensive effort to align educational pathways with global innovation and labor market trends, we identified 38 additional specialties that are either underrepresented or entirely absent in conventional academic orientation models. These specialties represent emerging intersections of technology, science, society, and creativity—and are essential to consider when designing future-ready frameworks.

We propose that these specialties be acknowledged as "Future Specialties to Be Covered". They serve as the *missing diamonds*; the high-potential domains that complement the existing 18 major fields and ensure a more complete, dynamic, and forward-looking academic and vocational guidance system.

The 38 specialities found missing diamonds fir Future Specialties *

Future Specialties to be Covered		
1. Artificial Intelligence Development	14. Renewable Energy Technologies	28. Fintech and Crypto Technologies
2. Machine Learning and Data Analysis	15. Climate Science and Meteorology	29. Banking and Digital Finance
3. Blockchain Applications	16. Green Policy and Environmental Law	30. Entrepreneurship and Business Innovation
4. Quantum Computing	17. Digital Fabrication and 3D Printing	31. Educational Technology (EdTech)
5. Big Data Engineering	18. Mechatronics Engineering	32. Digital Literacy and Lifelong Learning
6. Natural Language Processing	19. IoT for Industrial Systems	33. Digital Media and Animation
7. Cloud Computing and Virtualization	20. Biotechnology and Genetic Engineering	34. Creative Writing and Content Development
8. Cybersecurity and Ethical Hacking	21. Health Informatics and Medical Technology	35. Cultural and Media Entrepreneurship
9. Data Privacy and Digital Law	22. Medical Laboratory and Diagnostics	36. Sustainable and Electric Transportation
10. AI Infrastructure Management	23. Satellite Systems and Communication	37. Autonomous and Smart Vehicles
11. Web Development and E-Commerce Platforms	24. Space Robotics and Automation	38. Public Transport and Shared Mobility
12. Smart Materials and Nanotechnology	25. Precision Agriculture	
13. Space Medicine and Life Support	26. Agri-Biotechnology	
	27. Agricultural Robotics and Drones	

*Meaning and related explanations of each specialty is in Appendix 4 as all are included in SDACT

PHASE TWO: Benchmarking Existing Tools and Designing SDACT

To ensure that the Self-Discovery & Academic Compass Toolkit (SDACT) is both innovative and scientifically grounded, we conducted a rigorous review of 16 internationally recognized vocational and career guidance assessments. (Refer to *Appendix 1* for the complete list.)

From this pool, we selected the 7 most influential and widely adopted tools for in-depth comparison. These include instruments with established psychometric validity, global usage, and structured domain integration. The goal was to extract best practices while identifying critical gaps, particularly in alignment with future specialties, AI integration, and localized cultural sensitivity.

The insights gathered from this comparative study directly informed the development of SDACT, which addresses current limitations while offering a more holistic, AI-powered, and future-oriented solution.

Those 8 one are mentioned in this table:

Name	Code	Origin	Year	Official Website	Reference or Institution
Self-Discovery and Career Toolkit	**SDACT**	UAE	2025	https://www.arraa.net/en/an-almrkz	Alnajjar, A. (2025). SDACT Orientation Guide. ARAA Consultancy.
Kuder Occupational Interest Survey	**KOIS**	US	1939	https://www.kuder.com	Zytowski, D.G. (1994). KOIS Manual. Kuder, Inc.
Holland Self-Directed Search	**SDS**	US	1970	https://www.self-directed-search.com	Psychological Assessment Resources, Inc. Holland, J.L. (1997). Making Vocational Choices (3rd ed.).
YouScience Aptitude & Career Discovery	**YSA&CD**	US	2012	https://www.youscience.com	YouScience, Inc. YouScience Research Team (2020). YouScience Whitepaper.
Studiekeuze123 Career Test	**SCT**	Netherlands	2010	https://www.studiekeuze123.nl	Dutch Government Initiative Studiekeuze123 (2022). Keuzegids Hoger Onderwijs. Studiekeuze123
Compass Career Test	**CCT**	Sweden	2008	https://www.careertest.se/compass/	(2019). Compass User Guide. Stockholm. CareerTest Sweden (**CareerTest.se**)
Education and Career Guidance	**ECG**	Singapore	2015	https://www.moe.gov.sg/education-in-sg/our-programmes/education-and-career-guidance/overview	**Career Exploration,** Ministry of Education, Singapore (2016). iShine Framework Brief.

Framework for Evaluating Vocational Interest Tools

To establish a high standard for evaluating vocational guidance systems, we identified nine key dimensions critical to ensuring effectiveness, relevance, and future readiness. These dimensions span psychometric rigor, adaptability, alignment with global trends, and AI integration. Each reflects a strategic consideration in designing tools that are not only scientifically valid but also culturally responsive and future-focused.

The following table presents these dimensions along with practical implications for tool design and selection. This framework guided the comparative analysis of leading international assessments and directly shaped the development of the SDACT model.

Comparison Dimensions for Vocational Interest Tools

Dimension	Explanation
1: Psychometric Foundation	The scientific validity and reliability of the test, based on established theories (e.g., RIASEC, Big Five), standardized administration, and peer-reviewed calibration data. Practical Use: Does the tool have academic backing, consistent scoring, and a tested structure?
2: Customizability	The extent to which the tool can be adapted to different cultures, languages, user types (students, advisors, parents), or institutional settings. Practical Use: Can it be tailored for Arabic-speaking users? Can institutions adjust domain focus or output formats?
3: International Future Needs	The alignment of the tool's domains with global trends (e.g., digitalization, sustainability, AI) as defined by WEF, OECD, and UN SDGs. Practical Use: Does it prepare youth for the jobs and industries expected to dominate in the next 10–20 years?
4: Career Database Integration	The tool's ability to connect user results to a structured occupational database or classification (e.g., O*NET, ISCO, national job portals). Practical Use: Can users see matching careers and educational paths based on their scores?
5: Reporting & Feedback	The clarity, depth, and personalization of output reports — including user-friendly summaries, visuals, or next steps for planning. Practical Use: Does the tool give actionable, understandable guidance for students, parents, or counselors?
6: AI Empowerment	The use of artificial intelligence to enhance adaptive questioning, pattern recognition, predictive modeling, or personalized recommendations. Practical Use: Does the tool evolve with user responses, predict pathways, or use intelligent algorithms?
7: Psychological Feature Care	Attention to emotional, motivational, and cognitive dimensions influencing vocational preferences, beyond interest categories. Practical Use: Does it consider personality, anxiety, mindset, or psychological readiness?
8: Comprehensiveness	The range of dimensions assessed: interests, personality traits, values, influencers, hobbies, and possibly aptitudes. Practical Use: Does it offer a full-picture understanding or focus on just one trait?
9: Future Specialties Coverage	The degree to which the tool includes or prioritizes emerging, tech-driven, or sustainability-aligned subdomains and career paths. Practical Use: Are fields like AI, renewable energy, biotech, or smart cities explicitly featured? (See Appindex 4)

Output of Phase Two: Tool Evaluation through Strategic Dimensions

Using a carefully selected set of evaluation dimensions, a comprehensive review was conducted to assess the strengths and limitations of key vocational interest tools. The findings are presented in the following table, offering a clear comparative illustration across psychometric integrity, AI integration, customization, and alignment with future global needs.

Vocational Interest Tools Comparative Analysis

Tool	Psychometric Foundation	Customizability	International Future Needs	Career Database Integration	Reporting & Feedback	AI Empowerment	Psychological Feature Care	Comprehensiveness	Future Specialties Coverage
SDACT	🟢	🔵	🟢	🟠	🔵	🟢	🟢	🔵	🟢
KOIS	🟢	🟠	🟡	⚪	⚪	🔴	🟡	⚪	⚪
SDS	🟢	🟡	🟠	🟡	🟠	🔴	🟠	⚪	⚪
YSA&CD	🟢	🟢	🔵	🟢	🔵	🔵	🟢	🔵	⚪
SCT	🟢	🟢	🟡	⚪	🟡	🟠	🟡	🟡	⚪
CCT	🟡	🟡	🟡	🟡	🟡	🟠	🟢	🟢	🟡
ECG	🟢	🟡	🟢	🟢	🟡	🟠	🟡	🟢	⚪

Colors Key:

🔴 None / Not Present: Feature is missing or not applicable.
🟠 Basic / Minimal: Exists but limited in scope, outdated, or weak implementation.
🟡 Moderate / Clear: Adequate presence, functionally clear, but not deep or flexible.
🟢 Strong / Core Feature: A significant part of the system; well-integrated and user-oriented.
🔵 Exceptional / Core Strength: Outstanding execution; innovative and central to tool's value.
⚪ Unrated: Not clearly defined, pending clarification or outside evaluated range.

Overall Findings: Comparative Review of Vocational Interest Tools

The comparative analysis of seven vocational interest tools reveals several critical insights that highlight both the evolutionary gaps in legacy systems and the innovative edge of next-generation solutions like SDACT.

1. SDACT Sets a New Standard

SDACT (Self-Discovery & Academic Compass Toolkit) consistently outperforms other tools across all nine evaluation dimensions. It is the only tool to demonstrate:

- Full AI integration
- Deep attention to psychological readiness and mindset
- Explicit mapping of Future Specialties such as AI, green energy, and sustainability
- Comprehensive personalization, including language, cultural, and institutional adaptability

SDACT offers a holistic, future-aligned, and intelligent framework for guiding youth between ages 14–24 in their academic and professional development.

2. Legacy Tools Lack Future-Readiness

Traditional assessments like KOIS, SDS, and SCT remain limited in scope:

- They rely heavily on interest-only models (e.g., RIASEC) with minimal attention to emerging global trends
- They offer little to no AI functionality, static reporting, and weak feedback systems
- Psychological features such as motivation, anxiety, or adaptability are often ignored

These tools, while scientifically grounded, are outdated in the face of rapidly shifting labor market demands.

3. YSA&CD Is a Strong Commercial Competitor

YouScience Aptitude & Career Discovery (YSA&CD) emerges as a strong second-tier tool:

- It excels in AI empowerment, feedback generation, and psychometric depth
- It lacks, however, explicit integration of future specialties, limiting its strategic guidance
- It is more commercially driven and less adaptive to localized or governmental planning contexts

4. Career Integration & Customization Are Weak Points

Only a few tools provide:

- Real-time linkage to structured occupational databases (e.g., O*NET or national platforms)
- Customizability to local education systems, languages, and stakeholder needs (students, parents, institutions)

This reflects a significant implementation gap in global and regional relevance.

5. Future Specialties Are Widely Neglected

Despite the global emphasis on new industries and green economies:

- Only SDACT explicitly maps career guidance to Future Specialties
- Other tools do not account for AI, biotech, quantum computing, or sustainability as core domains

This confirms a critical shortcoming in existing frameworks when viewed through a future-oriented lens.

The comparative study clearly highlights SDACT's superiority in addressing both current and future educational demands. Unlike legacy tools that focus solely on interests or personality, SDACT integrates AI intelligence, comprehensive psychological insights, and a future specialties framework, positioning it as a next-generation vocational assessment system.

SDACT in it current version could be considered as a strategic platform that bridges the gap between traditional vocational psychology and 21st-century educational and employment trends. It responds to international benchmarks (e.g., WEF, UN SDGs, OECD), integrates cultural customization, and empowers users with AI-driven insights.

In doing so, it positions itself as the one of the relevant and comprehensive toolkit for youth development for the time being.

As the culmination of Phase Two in the SDACT development process, this table presents a clear articulation of each key component integrated into the toolkit. These indicators were carefully selected and validated to reflect core psychological, behavioral, and vocational dimensions essential for guiding youth aged 16–24 in their self-discovery and academic planning journey. The summary outlines not only what each component measures but also its strategic value—demonstrating how the SDACT toolkit provides actionable insights for individuals, families, educational consultants, and institutions. Each indicator contributes to a holistic understanding of the participant, thereby ensuring that future academic and vocational decisions are informed, authentic, and aligned with emerging opportunities.

SDACT Toolkit Component Indicators and Strategic Value Summary

#	Indicators	Strategic Value
1	Transparency & Engagement Level	Assesses openness and engagement level to ensure response validity and self-honesty
2	Well-Being	Detects emotional, cognitive, and physical strain to provide context for interpretation
3	Interest & Hobby Patterns	Reveals intrinsic motivation and areas of sustained curiosity and personal energy and patterns of interest
4	Behavioral Tendencies Mapping	Explores contrasting behavioral tendencies that shape academic alignment and work style
5	Vocational Preference	Matches personal inclinations with high-opportunity future career sectors
6	Influencers Mapping	Distinguishes internal preferences from external pressures to support authentic decision-making

For reliability assessment, SDACT was tested on an initial sample of 324 online participants (age range from 16 to 23) (mean age=18.4), 56% are femals. Results yield high ovelall mean of Cronbach's alpha scores for the all tests of SDACCT Toolkit of (0.93) indicating excellent internal consistency and measurement reliability for each scale is see in the following table.

Table: shows Cronbach's alpha score for every sub-scale

#	Cronbach's alpha score for SDACT	# Items	Score
1	Transparency & Engagement Level	11	0.949
2	Well-Being	15	0.886
3	Interest & Hobby Patterns	30	0.949
4	Behavioral Tendencies Mapping	40	0. 954
5	Vocational Preference	36–72	0.923
6	Influencers Mapping	30	0.945
Over all Cronbach's alpha score for the Kit		180	0.934

PHASE THREE: Finalizing the Self-Discovery & Academic Compass Toolkit (SDACT)

In this final phase, all reviewed literature, comparative analyses, and empirical findings were consolidated through a rigorous meta-analytical process. The insights gained from global benchmarking, tool evaluations, and strategic alignment studies were synthesized to shape the final structure of SDACT.

This phase marks the transformation of theoretical foundations and comparative reviews into a practical, evidence-based toolkit tailored to support youth in navigating their academic and career trajectories with clarity, confidence, and future relevance.

SDACT Vision

To inspire every young person to explore their unique potential and shape their academic and professional journey with clarity, confidence, and purpose, contributing to a resilient, future-oriented society.

SDACT Mission

To provide a scientifically grounded, AI-powered self-discovery toolkit that guides youth aged 16–24 in exploring their inner preferences, personality traits, academic interests, and external influences. By delivering personalized insights and strategic direction, the toolkit supports families, educators, and decision-makers in fostering well-informed, future-oriented development paths for every individual.

Purpose of the Toolkit

This toolkit aims to:

1. Promote self-awareness and autonomy in youth decision-making
2. Align academic and career interests with inner traits and real-world opportunities
3. Highlight sources of external influence on preferences
4. Encourage meaningful conversations between students, advisors, and families
5. Provide data-informed direction toward academic specialization and career exploration

Toolkit Component Summary: Structure, Scope, and Added Value

The Self-Discovery & Academic Compass Toolkit (SDACT) is composed of multiple interlinked components, each designed to assess distinct psychological, behavioral, and contextual dimensions. Together, these components form a comprehensive diagnostic system that supports self-awareness, academic planning, and future-oriented decision-making.

The table below outlines each component of the toolkit, detailing the primary dimensions assessed and the specific value added to the overall guidance process. This structure ensures that every data point contributes to a personalized, culturally responsive, and insight-driven profile for each respondent.

Toolkit Component Summary: Structure, Scope, and Added Value

Component	Main Dimensions Assessed	Added Value to the Toolkit
1. Personal Information	Demographic reference only, information as required, school results for 3 years back.	Allows contextual understanding of responses and supports tailored feedback.
2. Transparency Test	Openness, Self-Awareness, Willingness to Engage & Honestly	Enhances validity by identifying how genuinely respondents participate in the toolkit.
3. Well-Being test	1. Emotional Well-Being 2. Cognitive & Social Functioning 3. Physical/Somatic Symptoms 4. Anxiety & Tension 5. Fear of Failure / Self-Confidence 6. Social & Peer Pressure	Provides a supportive snapshot of current well-being to flag challenges or affirm strengths. Furtherly, a worries test would be applied if failed (Dimensions from 5 to 9) the test to tackle Fears,

Component	Main Dimensions Assessed	Added Value to the Toolkit
	7. Academic Performance Pressure 8. Family Expectation & Belonging 9. Overthinking & Physical Stress	Pressure, Overthinking and Physical Stress.
4. Hobby Screening	1. Creative Expression 2. Digital & Technical Skills 3. Social & Public Engagement 4. Scientific & Analytical Activities 5. Physical & Outdoor Activities 6. Cultural, Ethical & Reflective Interests	Identifies recurring interests that may suggest future domains of strength or curiosity.
5. Bipolar Behavioral Preferences	1. Deep Thinker Vs Fast Actor 2. Introvert Vs Extravert 3. Risk-Avoidant Vs Risk-Taking 4. Routine-Lover Vs Variety-Seeker 5. Sensitive Vs Steady 6. External Structure Vs Self-Driven 7. Low Physical Demand Vs Active Preference 8. Verbal Vs Visual-Spatial 9. Resistant Vs Coachable 10. Follower Vs Decision-Maker	Reveals core personal traits that influence academic fit, environment preference, and vocational behavior.
6. Vocational Domain Preference Profile	1. AI & Emerging Technologies 2. Cybersecurity & Data Systems 3. Engineering & Robotics 4. Space & Aeronautics 5. Environmental & Natural Sciences 6. Healthcare & Medical Innovation 7. Psychological & Human Support Services 8. Legal & Ethical Professions 9. Political Science & Diplomacy 10. Education & Training 11. Media, Journalism & Communication 12. Design & Visual Arts	Maps areas of strong academic/career interest and helps direct personal exploration and planning.

Component	Main Dimensions Assessed	Added Value to the Toolkit
	13. Performing Arts & Creative Industries 14. Sports & Physical Performance Sciences 15. Military, Security & Tactical Services 16. Hospitality, Tourism & Events Management 17. Entrepreneurship & Business Innovation 18. Financial Services & Economic Development	
7. Source of Influence Inventory	1. Parental Influence 2. Sibling & Family Peer Influence 3. Friend/Peer Influence 4. Academic/Mentor Influence 5. Media Influence 6. Cultural Norms & Societal Pressure 7. Economic/Job Market Awareness 8. Self-Driven Inner Voice 9. Role Models / Public Figures 10. Life Aspiration & Lifestyle Desires	Distinguishes internal preferences from external pressures to support authentic decision-making.

Toolkit Outputs and Integration

SDACT Toolkit Core Outputs

The SDACT Project delivers three core outputs, each designed to support both individual development and strategic planning at institutional levels:

1. Personalized Insight Report for Each Respondent

Every participant instantly receives a comprehensive, personalized report. This report includes key insights such as:

- Psychological well-being and emotional status
- Personality traits and internal motivators

- Hobbies and personal interests
- Vocational preferences and inclinations
- External influences shaping decisions (e.g., family, environment)

This rich profile empowers users with self-awareness, clarity in educational choices, and informed career planning.

2. SDACT AI-Automated Mentor Platform

An always-available AI mentorship platform is activated for each respondent. Through real-time, supportive dialogue, users can:

- Address personal concerns and life decisions
- Receive tailored suggestions on academic or career choices
- Stay emotionally balanced through regular check-ins

To enhance guidance quality, users may optionally upload relevant supporting data (e.g., medical reports, past academic records, training certifications, or skill profiles).

3. Strategic Insights for Planners and Decision-Makers

SDACT also serves the broader community by providing aggregated, anonymized data to:

- Psychologists, counselors, and educators
- Government entities and national planners, Schools, Universities
- Youth development and employment policymakers

These insights support evidence-based strategy formulation aligned with societal priorities and future workforce development without delving into gender-based or identity-sensitive narratives.

SDACT Conclusion

SDACT is more than a tool, it is a pioneering, one-of-its-kind solution offering exceptional depth and clarity in understanding youth. It provides a comprehensive profile of everyone's preferences, personality traits, hobbies, and key influences, forming a holistic view of who they are and where they can thrive.

This evidence-based, AI-powered system transforms individual responses into actionable insights, benefiting not only students, but also educators, counselors, and decision-makers. The resulting data serves as a valuable resource for institutions and consultants, supporting personalized guidance, alignment of educational programs with student potential, and the development of forward-thinking interventions. SDACT advances self-awareness into personal growth and transforms insights into strategic development on both individual and institutional levels.

Appindex 1
Studies relates to SDACT consturction:

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11. (2017). Worrying about what? An investigation of the phenomenon of worry among students of the United Arab Emirates University. *International Journal of Humanities and Social Sciences Review,* 3(5).

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Appindex 2
Wellknown tests reviewed

Test Name	Origin /Country	Digital/ Online	Self-Check	Age Range	Notable Features
ESVI (Emirates Scale for Vocational Interest)	UAE	✅	✅	14–24	Culturally tailored, UAE-relevant, linked to SDACT & UAE domains
Kuder Career Interests Assessment (KOIS)	USA	✅	✅	13+	Career clusters, education pathways, career planning tools
Holland's RIASEC-based SDS (Self-Directed Search)	USA	✅	✅	15+	Matches users to RIASEC codes and careers; easy self-scoring
Briggs-Myers Type Indicator (MBTI) – Career Reports	USA	✅	✅	16+	Links personality types to career preferences (not purely vocational)
Career Key	USA	✅	✅	13+	Based on Holland's RIASEC, career match + values, personality
Strong Interest Inventory (SII) (via counselor)	USA	✅	NO	16+	Deep profiling, matched with occupations; needs professional access
YouScience	USA	✅	✅	14+	Combines interest + aptitudes using brain games; highly personalized
MAPP (Motivational Appraisal of Personal Potential)	USA	✅	✅	15+	Free initial test, commercial detailed results; maps to 1000+ jobs
CareerExplorer by Sokanu	Canada /USA	✅	✅	14+	Comprehensive platform, real-time analytics, personality + interests
My Next Move (ONet Interest Profiler)	USA	✅	✅	14+	Free, U.S. Dept. of Labor, Holland Code-based
iShine Programme	**Singapore**	✅	✅	14–18	Developed with MOE Singapore, combines aptitude + interest, widely used in schools.
LOOP Career Test	**Netherlands**	✅	✅	16+	Based on Dutch vocational models (LDCs), aligns interest, personality, and job fit using Holland Code.
Studiekeuze123 Test	**Netherlands**	✅	✅	16–24	Government-backed tool for Dutch students choosing higher education; RIASEC-aligned and highly structured.
JobPersonality Test	**Belgium/Netherlands**	✅	✅	15+	Multilingual, RIASEC-based, includes values and preferences; free with optional paid report.
Compass Test by CareerTest.se	**Sweden**	✅	✅	16–24	Combines personality, values, and motivation to suggest career paths; uses Swedish academic models.

Appindex 3-B
Links and info about the tests used for deep analysis

Name	Origin	Year	Official Website	Reference or Institution
Emirates Scale for Vocational Interest (ESVI)	UAE	2022	https://www.arraa.net/en/an-almrkz	Alnajjar, A. (2023). ESVI Technical Manual, UAEU
Self-Discovery and Career Toolkit (SDACT)	UAE	2025	https://www.arraa.net/en/an-almrkz	Alnajjar, A. (2025). SDACT Orientation Guide. ARAA Consultancy.
Kuder Occupational Interest Survey (KOIS)	US	1939	https://www.kuder.com	Zytowski, D.G. (1994). KOIS Manual. Kuder, Inc.
Holland Self-Directed Search (SDS)	US	1970	https://www.self-directed-search.com	Psychological Assessment Resources, Inc. Holland, J.L. (1997). Making Vocational Choices (3rd ed.).
YouScience Aptitude & Career Discovery (YS)	US	2012	https://www.youscience.com	YouScience, Inc. YouScience Research Team (2020). YouScience Whitepaper.
Studiekeuze123 Career Test (SCT)	Netherlands	2010	https://www.studiekeuze123.nl	Dutch Government Initiative Studiekeuze123 (2022). Keuzegids Hoger Onderwijs. Studiekeuze123
Compass Career Test (CCT)	Sweden	2008	https://www.careertest.se/compass/	CareerTest.se (2019). Compass User Guide. Stockholm. CareerTest Sweden (**CareerTest.se**)
Education and Career Guidance (ECG)	Singapore	2015	https://www.moe.gov.sg/education-in-sg/our-programmes/education-and-career-guidance/overview	**Career Exploration,** Ministry of Education, Singapore (2016). iShine Framework Brief.

Appindex 3-A
Narrative summary for each selected vocational interest platform based on 8 dimensions.

This offers a deep qualitative understanding before we later translate it into a comparative matrix.

1. Emirates Scale for Vocational Interest (ESVI)

A UAE-born vocational tool, part of the SDACT ecosystem.

- **Psychometric Foundation**: Built on RIASEC logic with regionally validated constructs. Solid local adaptation but still growing in published psychometric analysis.
- **Customizability**: High. It adapts to Arabic, UAE cultural nuances, and includes locally relevant domains.
- **International Future Needs Alignment**: Emerging. Strong efforts made to align with the UAE 2071 vision and global megatrends.
- **Integration with Career Databases**: Moderate. SDACT is working toward linking ESVI results with educational tracks and career clusters.
- **Reporting and Feedback**: Strong. Designed for guided and self-exploratory use, with clarity for students, families, and consultants.
- **AI Empowerment**: Being integrated within SDACT. AI used for adaptive question selection and trend analytics.
- **Psychological Feature Care**: Medium to high. Offers insight into interests, influencers, and partial personality fit.
- **Comprehensiveness**: Above average. Covers vocational interests, hobbies, influencers, and partially personality traits.

2. SDACT System

An advanced AI-powered ecosystem developed in UAE.

- **Psychometric Foundation**: Still expanding research base, but aligned with globally accepted frameworks.
- **Customizability**: Very high. Designed to personalize profiles across the 18 domains and subdomains.
- **International Future Needs Alignment**: Strong. Built with future job clusters in mind and aligned with UAE Vision 2071 and WEF future skills.
- **Integration with Career Databases**: In progress. Targets full integration with national education and labor systems.
- **Reporting and Feedback**: Exceptional. Insightful, layered, and AI-generated reports tailored to different stakeholders.
- **AI Empowerment**: Core feature. Uses AI for profiling, recommendation, behavioral clustering, and emotional balance indicators.
- **Psychological Feature Care**: Strong. Includes emotional, motivational, and social influencers in analysis.
- **Comprehensiveness**: Very high. It merges vocational interests with hobbies, values, influencers, and optional aptitude indicators.

3. Kuder Occupational Interest Survey (KOIS) - USA

One of the most widely used legacy vocational tools.

- **Psychometric Foundation**: Strong. Deeply rooted in empirical validation and RIASEC theory.
- **Customizability**: Limited. Mostly structured for U.S. frameworks, with limited cultural localization.
- **International Future Needs Alignment**: Moderate. Covers established fields well but less predictive for emerging careers.
- **Integration with Career Databases**: Excellent (U.S.-centric). Maps well to O*NET and U.S. job clusters.
- **Reporting and Feedback**: Clear, structured reports, but less interactive or adaptive.
- **AI Empowerment**: Minimal to none. Static delivery of results.
- **Psychological Feature Care**: Moderate. Focuses on interest, less on personality, values, or emotional nuance.
- **Comprehensiveness**: Medium. Primarily interest-focused.

4. Holland Self-Directed Search (SDS) - USA

A globally respected, self-administered career guidance tool based on RIASEC.

- **Psychometric Foundation**: Strong. Long-standing validity with wide adoption.
- **Customizability**: Moderate. Offers different forms (Form E for students), but not very localized.
- **International Future Needs Alignment**: Low to moderate. Best suited for classic career mapping.
- **Integration with Career Databases**: Good in the U.S., limited globally.
- **Reporting and Feedback**: Structured and easy to self-score, but basic in terms of feedback depth.
- **AI Empowerment**: None.
- **Psychological Feature Care**: Basic. Focus is strictly on vocational interest.
- **Comprehensiveness**: Limited. No personality or influencer dimension.

5. YouScience - USA

A new-generation, AI-powered assessment platform.

- **Psychometric Foundation**: High. Combines aptitude games with interest and personality metrics.
- **Customizability**: High. Dynamic delivery adjusts to responses and learning preferences.
- **International Future Needs Alignment**: Very high. Integrates future job trends and emerging career clusters.
- **Integration with Career Databases**: Strong. Matches with real-time labor market needs and learning tracks.
- **Reporting and Feedback**: Exceptional. Rich, personalized reports with interactive pathways.
- **AI Empowerment**: Core strength. Uses AI for performance prediction and dynamic matching.
- **Psychological Feature Care**: Strong. Accounts for motivation, processing style, and engagement tendencies.
- **Comprehensiveness**: Very high. Covers aptitude, interest, style, and development suggestions.

6. Studiekeuze123 - (Netherlands)

Dutch government-endorsed vocational and academic matching tool.

- **Psychometric Foundation**: Solid, but less public detail. Based on RIASEC and validated surveys.
- **Customizability**: High within Dutch context; multiple filters for preferences and study behavior.
- **International Future Needs Alignment**: Moderate. Best for mapping to EU/NL study routes.
- **Integration with Career Databases**: Excellent in Netherlands.
- **Reporting and Feedback**: Clear visual feedback, adapted to student's learning style.
- **AI Empowerment**: Minimal.
- **Psychological Feature Care**: Moderate. Some inclusion of personality and learning preferences.
- **Comprehensiveness**: Moderate to high. Primarily study choice, partially career-related.

7. Compass Test - (Sweden)

A Scandinavian model combining values, personality, and career.

- **Psychometric Foundation**: Solid, though less transparent in academic publishing.
- **Customizability**: Moderate. Offers adaptive language and values fit but not system-wide flexibility.
- **International Future Needs Alignment**: Good. Maps results to future-ready competencies and work values.
- **Integration with Career Databases**: Moderate. Swedish and EU systems linked.
- **Reporting and Feedback**: Good detail on personality-career alignment.
- **AI Empowerment**: Low.
- **Psychological Feature Care**: High. Emphasizes well-being, value match, personality style.
- **Comprehensiveness**: High. Strong on internal factors but lighter on aptitude.

8. iShine Programme (Singapore)

Developed by the Ministry of Education, integrated into school guidance.

- **Psychometric Foundation**: High. Locally validated and adapted for Singapore's competitive education system.
- **Customizability**: Moderate to high. Calibrated for national educational tracking.
- **International Future Needs Alignment**: Very strong. Singapore emphasizes AI, STEM, and future skill domains.
- **Integration with Career Databases**: Strong. Mapped to national frameworks (MySkillsFuture.sg).
- **Reporting and Feedback**: Clear, actionable insights tied to school pathways and higher education.
- **AI Empowerment**: Emerging. AI is being integrated into guidance tools.
- **Psychological Feature Care**: Moderate. Emotional needs considered in school settings, but limited psych depth.
- **Comprehensiveness**: High within academic-vocational planning, but less detailed on personal influencers.

Appendix 4
Meaning and definitions of All Vocational Domains and it's subdomain listed in SDACT

1. AI, Data Science, and Emerging Technologies

The technologies shaping tomorrow's industries and societies, from artificial intelligence and big data to blockchain and quantum computing. A dynamic and continuously evolving field requiring curiosity, creativity, and technical mastery.

Main domain Description

Scoop & meaning	Designing, developing, and applying advanced technologies like artificial intelligence, data science, blockchain, and quantum computing to solve complex problems across industries.
Prime Effort Required	Coding intelligent systems, analyzing large datasets, building blockchain solutions, creating quantum algorithms, and applying emerging tech in healthcare, finance, or energy.
Work Environment	Mostly project-based, innovative-driven work in tech companies, research institutions, startups, or governmental initiatives. Remote work is common.
Career Rewards and Benefits	High salary potential, global mobility, leadership roles in digital transformation, and involvement in cutting-edge technology.
Key Skills and Personal Qualities Needed	Logical thinking, coding proficiency, creative problem-solving, adaptability, teamwork, and continuous learning appetite.

Description of each specialty (subdomain)

#	SUBDOMAINS	DEFINITION
1	Artificial Intelligence Development	Designing systems that can learn, adapt, and make decisions autonomously across different industries.
2	Machine Learning and Data Analysis	Enabling machines to improve performance through learning from data to drive smarter decisions.
3	Blockchain Applications	Developing secure and decentralized digital solutions that transform industries like finance, logistics, and public services.
4	Quantum Computing	Creating next-generation computing models based on quantum mechanics for solving extremely complex problems.
5	Big Data Engineering	Managing and optimizing large-scale data ecosystems to extract strategic insights for organizations.
6	Natural Language Processing	Building AI systems that can understand, interpret, and generate human language for enhanced communication technologies.

2. Information Technology, Cybersecurity, and Digital Systems

The digital nervous system of modern society, powering communication, data security, infrastructure, and innovation. This domain prepares you to build, protect, and manage information systems across industries, enabling the global economy to function securely and efficiently.

Main domain Description

Scoop & meaning	Designing, developing, managing, and securing digital information systems to ensure safe, reliable, and innovative technological infrastructures.
Prime Effort Required	Programming software, managing IT systems, developing cybersecurity defenses, supporting cloud platforms, and optimizing digital networks.
Work Environment	Technology companies, IT departments, cybersecurity firms, and government agencies, with possibilities for remote work and crisis-response roles.
Career Rewards and Benefits	High global demand, strong career growth, attractive salaries, leadership opportunities in technology industries.
Key Skills and Personal Qualities Needed	Analytical thinking, problem-solving ability, technological adaptability, logical reasoning, ethical responsibility.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Software Development	Building, testing, and maintaining applications that drive businesses and services across industries.
2	Network and Systems Administration	Managing connectivity, performance, and security of digital networks and IT infrastructures.
3	Cloud Computing and Virtualization	Creating platforms for remote access to computing resources, revolutionizing operational efficiency.
4	Cybersecurity and Ethical Hacking	Protecting systems from cyber threats through proactive defense and ethical hacking practices.
5	Information Systems Management	Strategically planning and overseeing the operation of information systems to align with organizational goals.
6	Data Privacy and Digital Law	Ensuring compliance with legal standards for data protection and user privacy in the digital world.
7	Web Development and E-Commerce Platforms	Building interactive websites and online commercial platforms that connect businesses with global audiences.
8	AI Infrastructure Management	Supporting the development and security of artificial intelligence systems deployed across industries.

3. Engineering and Smart Manufacturing (Industry 4.0)

Engineering and Smart Manufacturing form the backbone of future economies through automation, robotics, and intelligent production systems. This domain includes modern approaches to industrial systems, digital fabrication, and advanced engineering solutions in response to global challenges.

Main domain Description

Scoop & meaning	This domain involves the application of engineering principles to design, manufacture, and optimize products and systems using smart technologies such as robotics, AI, IoT, and advanced materials.
Prime Effort Required	Designing systems, working with machinery, programming automation tools, developing digital twins, and integrating sensors and AI into production processes.
Work Environment	Work may take place in factories, engineering firms, R&D centers, or tech-based manufacturing sites. Collaboration with global teams and project-based timelines are common.
Career Rewards and Benefits	Strong demand for skilled professionals in high-tech manufacturing, opportunities for innovation, leadership in sustainability, and contribution to national industrial strategies.
Key Skills and Personal Qualities Needed	Analytical thinking, attention to detail, proficiency with digital tools and CAD software, teamwork, and strong understanding of engineering fundamentals.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Mechanical Systems Engineering	Designing and maintaining mechanical components, tools, and automated systems used in manufacturing and production.
2	Industrial Automation and Control	Applying robotics, sensors, and software to automate manufacturing processes and increase efficiency.
3	Smart Materials and Nanotechnology	Developing new materials with enhanced properties for use in electronics, aerospace, medical, and consumer products.
4	Digital Fabrication and 3D Printing	Using digital tools and additive manufacturing techniques to create customized, efficient products.
5	Mechatronics Engineering	Integrating electrical, mechanical, and computer systems in automated machines and intelligent devices.
6	IoT for Industrial Systems	Embedding connectivity and data-sharing into machines to monitor and control production remotely.
7	Maintenance Engineering and Reliability	Ensuring machines and production systems operate reliably and efficiently over time.

4. Health Sciences, Biotechnology, and Medical Innovations

This domain focuses on improving human health through clinical care, medical research, and biotechnology. It blends science, compassion, and technology to develop innovative treatments, support preventive care, and improve global healthcare outcomes.

Main domain Description

Scoop & meaning	Explores the biological, medical, and technological foundations of healthcare. Professionals in this field work to understand diseases, create treatments, and improve patient care through innovation and discovery.
Prime Effort Required	Conducting medical research, developing biotech products, diagnosing diseases, providing care in clinics and hospitals, and collaborating with pharmaceutical and health tech companies.
Work Environment	Work environments include hospitals, laboratories, biotech firms, universities, and international health organizations. Roles may involve shift work, lab safety standards, and interdisciplinary collaboration.
Career Rewards and Benefits	A high-impact career that contributes directly to saving lives and improving well-being. Strong job stability, innovation potential, and growth in biotechnology and personalized medicine.
Key Skills and Personal Qualities Needed	Scientific curiosity, attention to detail, compassion, ethical awareness, problem-solving skills, and strong communication with diverse professionals.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Clinical Medicine and Surgery	Diagnosing and treating illnesses, performing surgical interventions, and guiding patients through recovery and care plans.
2	Public Health and Epidemiology	Studying patterns of disease in populations and designing programs to promote health and prevent outbreaks.
3	Biotechnology and Genetic Engineering	Developing treatments and vaccines using living cells, DNA technologies, and molecular tools.
4	Pharmaceutical Sciences	Designing, producing, and regulating medications that treat or prevent health conditions.
5	Medical Laboratory and Diagnostics	Using laboratory tools and techniques to detect, analyze, and monitor diseases at a molecular or cellular level.
6	Health Informatics and Medical Technology	Applying digital technologies and data systems to enhance patient care and hospital management.
7	Rehabilitation and Therapeutic Sciences	Helping individuals recover and regain function through physiotherapy, occupational therapy, or speech-language intervention.

5. Space Sciences and Aeronautics

This domain explores technologies and sciences related to space exploration, satellite systems, and advanced flight technologies. It plays a critical role in national innovation, global positioning, telecommunications, and interplanetary missions.

Main domain Description

Scoop & meaning	Focuses on the development, operation, and application of technologies for space missions, aerospace engineering, satellite operations, and interplanetary research.
Prime Effort Required	Designing spacecraft, analyzing satellite data, conducting experiments in orbital environments, and developing navigation or propulsion systems.
Work Environment	Work typically occurs in government space agencies, research labs, defense sectors, aerospace firms, or international collaborations. Long project timelines and high technical accuracy are common.
Career Rewards and Benefits	Involvement in high-prestige international missions, contributions to space science, improved global communication systems, and access to growing space-related industries.
Key Skills and Personal Qualities Needed	Strong background in physics and mathematics, technical design skills, precision, resilience under complexity, and international collaboration mindset.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Aerospace Engineering	Designing, testing, and manufacturing aircraft, satellites, spacecraft, and missiles.
2	Astrophysics and Cosmology	Studying celestial bodies, the origin and evolution of the universe, and black holes or star systems.
3	Satellite Systems and Communication	Building and managing satellites used for communication, navigation, weather forecasting, and Earth observation.
4	Orbital Mechanics and Propulsion	Designing propulsion systems and calculating the movement of space objects.
5	Space Robotics and Automation	Developing robotic systems used in planetary exploration, satellite servicing, or deep-space missions.
6	Space Medicine and Life Support	Researching human physiology in space and developing health and life-support systems for astronauts.

6. Environmental Science, Sustainability, and Renewable Energy

This domain addresses climate challenges, environmental protection, and clean energy transition. It equips professionals to create sustainable systems that protect ecosystems and ensure energy security for future generations.

Main domain Description

Scoop & meaning	Focuses on protecting natural resources, managing climate change, and innovating renewable energy solutions. It integrates science, engineering, and policy to create sustainable environmental systems.
Prime Effort Required	Monitoring pollution, designing renewable energy grids, performing environmental impact assessments, and advising on green policies or waste reduction.
Work Environment	Work spans government agencies, environmental consultancies, energy firms, NGOs, and research labs. Often requires fieldwork, lab testing, and stakeholder reporting.
Career Rewards and Benefits	Direct contribution to global sustainability, climate leadership roles, innovation in green energy, and strong growth in eco-policy and consulting careers.
Key Skills and Personal Qualities Needed	System thinking, ecological awareness, ethical responsibility, technical analysis, and passion for environmental protection.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Environmental Engineering	Designing systems to manage waste, treat water, and reduce industrial pollution.
2	Renewable Energy Technologies	Developing and managing solar, wind, hydro, and geothermal energy systems.
3	Science and Meteorology	Studying climate systems, modeling changes, and advising on adaptation policies.
4	Sustainable Urban Planning	Designing cities that minimize environmental impact and promote green mobility.
5	Conservation and Biodiversity Management	Protecting endangered species, habitats, and restoring ecosystems
6	Green Policy and Environmental Law	Shaping and enforcing laws, policies, and agreements for environmental protection.

7. Agriculture, Food Security, and Agri tech

This domain ensures the world's population has access to safe, nutritious, and sustainable food through advanced agricultural practices and technologies. It includes precision farming, Agri-biotech, food systems innovation, and sustainable land management.

Main domain Description

Scoop & meaning	Focuses on developing efficient, climate-resilient agricultural systems that maximize food production while preserving natural resources and biodiversity.
Prime Effort Required	Monitoring crop performance, applying biotechnology, managing agri-robotics systems, optimizing irrigation, and researching food distribution systems.
Work Environment	Roles span from field-based work and greenhouse management to laboratory research, agribusiness management, and international food policy organizations.
Career Rewards and Benefits	Leadership in global food security efforts, contributions to combating hunger and malnutrition, innovation in food technology, and sustainable farming systems.
Key Skills and Personal Qualities Needed	Systems thinking, biological sciences knowledge, adaptability to climate change, data literacy, and passion for sustainability.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Precision Agriculture	Using GPS, sensors, and AI to optimize crop yields, resource use, and minimize waste in farming systems.
2	Agri-Biotechnology	Applying genetics, molecular biology, and biotech techniques to enhance crop resilience and food nutrition.
3	Soil and Water Management	Improving irrigation systems, reducing erosion, and managing water usage for sustainable agriculture.
4	Food Systems Innovation	Designing resilient supply chains, reducing food loss, and developing alternative food products like lab-grown meat.
5	Sustainable Livestock and Aquaculture	Developing humane and efficient systems for raising animals and farming fish responsibly.
6	Agricultural Robotics and Drones	Implementing automation and aerial imaging to monitor and manage large-scale farming operations.

8. Business, Finance, Fintech, and Real Estate

This domain drives economic growth, investment, and innovation through business leadership, financial strategies, and real estate development. It includes digital banking, entrepreneurship, wealth management, and smart cities infrastructure.

Main domain Description

Scoop & meaning	Focuses on planning, executing, and managing financial, investment, and real estate strategies using modern business tools and emerging technologies like blockchain and AI.
Prime Effort Required	Developing business plans, conducting market research, creating investment portfolios, managing fintech products, and guiding property acquisition or urban expansion.
Work Environment	Work settings range from banks, investment firms, consultancies, and tech startups to government development entities and real estate agencies.
Career Rewards and Benefits	High earning potential, business ownership, global finance leadership, and impact on urban and digital economy infrastructure.
Key Skills and Personal Qualities Needed	Financial literacy, decision-making under uncertainty, negotiation skills, tech-savviness, and entrepreneurial thinking.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Financial Planning and Investment Management	Advising individuals or institutions on saving, investing, and asset growth strategies.
2	Banking and Digital Finance	Delivering financial services through mobile banking, online platforms, and blockchain solutions.
3	Entrepreneurship and Business Innovation	Starting, scaling, or transforming businesses to meet market needs or social challenges.
4	Real Estate Development and Management	Planning, constructing, and operating commercial and residential properties.
5	Fintech and Crypto Technologies	Creating tech solutions for lending, insurance, digital wallets, and cryptocurrency trading.
6	Economic Strategy and Trade Policy	Shaping national economic direction, foreign trade agreements, and regulatory frameworks.

9. Law, Legal Technologies, and International Arbitration

This domain supports justice, governance, and global commerce through legal practice, policy development, and dispute resolution. It blends traditional legal expertise with modern technologies like AI-powered legal research and digital court systems.

Main domain Description

Scoop & meaning	Focuses on upholding legal frameworks, protecting rights, resolving conflicts, and modernizing legal processes through innovation and international standards.
Prime Effort Required	Drafting legal documents, conducting legal analysis, arguing cases, designing digital tools for courts, and managing arbitration or compliance procedures.
Work Environment	Work settings include law firms, government institutions, arbitration centers, regulatory agencies, and international organizations. Global mobility is common.
Career Rewards and Benefits	High societal impact, leadership in justice systems, opportunities in global legal networks, and expanding roles in legal tech and international arbitration.
Key Skills and Personal Qualities Needed	Critical thinking, negotiation, research, legal ethics, adaptability to new technologies, and cross-cultural communication.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Corporate and Commercial Law	Handling legal aspects of businesses, contracts, partnerships, and transactions.
2	Legal Technology and AI	Using software to automate research, compliance, case analysis, and e-discovery.
3	Public and Constitutional Law	Ensuring state accountability, civil rights, and alignment with national constitutions.
4	International Law and Treaties	Managing diplomatic agreements, global regulations, and disputes between nations.
5	Alternative Dispute Resolution (ADR)	Solving conflicts through mediation and arbitration instead of traditional litigation.
6	Cyber Law and Data Protection	Regulating internet use, digital identities, online rights, and privacy compliance.

10. Social Sciences, Humanities, and Community Services

This domain addresses the human experience by studying cultures, behaviors, histories, and societies while supporting individuals and communities through education, counseling, and outreach.

Main domain Description

Scoop & meaning	Explores human society, behavior, history, and culture. It combines academic analysis with service-based careers aimed at improving well-being and empowering communities.
Prime Effort Required	Conducting social research, designing community programs, providing counseling or advocacy, analyzing behavior or history, and delivering public engagement.
Work Environment	Careers span universities, NGOs, public service, mental health centers, museums, and international development organizations. Collaboration and empathy are key.
Career Rewards and Benefits	Meaningful public impact, cultural enrichment, resilience building, mental health support, and contributions to inclusive social policies.
Key Skills and Personal Qualities Needed	Empathy, cultural awareness, communication, critical analysis, ethics, and a desire to serve and uplift others.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Psychology and Behavioral Sciences	Studying human thoughts and actions to improve mental well-being, learning, and relationships.
2	Sociology and Anthropology	Analyzing cultures, traditions, and social systems to understand community behavior and global diversity.
3	History and Philosophy	Exploring past civilizations, ethics, ideas, and philosophies to inform modern life and identity.
4	Social Work and Human Services	Helping individuals and families navigate challenges through support programs and advocacy.
5	Public Policy and Development Studies	Designing inclusive social policies and assessing their impact on health, education, and equity.
6	Cultural Heritage and Museum Studies	Preserving and interpreting historical artifacts, local heritage, and global artistic traditions.

11. Education, EdTech, and Human Capital Development

This domain transforms learning and workforce preparation through modern educational systems, digital learning tools, and talent development programs. It shapes minds, cultivates skills, and ensures future generations are prepared for evolving challenges.

Main domain Description

Scoop & meaning	Focuses on designing and delivering inclusive, technology-driven education that fosters lifelong learning and workforce excellence.
Prime Effort Required	Teaching in classrooms or online, developing curricula, integrating education technology, conducting training programs, and supporting learner assessment and development.
Work Environment	Role's span schools, universities, ministries, corporate learning divisions, NGOs, and edtech startups. Includes both in-person and digital work environments.
Career Rewards and Benefits	Impact on individual and societal growth, access to global learning tools, and leadership in digital transformation of education systems.
Key Skills and Personal Qualities Needed	Creativity, digital literacy, instructional design, mentorship, lifelong learning mindset, and empathy.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Curriculum and Instructional Design	Creating content, lesson plans, and assessments aligned with educational goals and learner needs.
2	Educational Technology (EdTech)	Integrating tools like virtual classrooms, AI tutors, and gamified platforms into teaching environments.
3	Early Childhood and Special Education	Supporting foundational learning and inclusive education for students with diverse abilities.
4	Leadership in Education and Policy	Shaping educational systems through policy, reform initiatives, and school leadership.
5	Corporate Training and Human Capital Development	Developing workforce skills, talent programs, and leadership pipelines in business settings.
6	Digital Literacy and Lifelong Learning	Helping individuals of all ages develop critical digital skills and adapt to continuous learning.

12. Arts, Design, Creative Industries, and Media

This domain powers cultural expression, storytelling, and digital content creation. It combines tradition and technology to inform, inspire, and entertain global audiences.

Main domain Description

Scoop & meaning	Combines artistic expression, design thinking, and communication tools to produce compelling content, immersive experiences, and visual or audio products.
Prime Effort Required	Creating artwork, designing digital media, directing productions, writing content, developing user interfaces, or building immersive environments like AR/VR.
Work Environment	Work spans studios, media companies, cultural organizations, marketing agencies, and freelance projects. Often remote, flexible, and portfolio-driven.
Career Rewards and Benefits	Recognition, creative fulfillment, global exposure, and income through innovation in content, branding, and digital culture.
Key Skills and Personal Qualities Needed	Imagination, storytelling, visual communication, adaptability to trends, emotional intelligence, and aesthetic sense.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Visual and Graphic Design	Creating visual content and branding using tools like Photoshop, Illustrator, and UX design software.
2	Performing Arts and Production	Acting, directing, or producing live shows, films, and multimedia experiences.
3	Creative Writing and Content Development	Writing stories, scripts, social media, or journalism pieces that engage and inform.
4	Digital Media and Animation	Using animation, motion graphics, and video editing to tell stories and market products.
5	Fashion, Product, and Interior Design	Designing consumer goods, garments, or spatial environments that blend function and beauty.
6	Cultural and Media Entrepreneurship	Building creative enterprises such as art studios, digital platforms, or media startups.

13. Tourism, Heritage, Event Management, and Hospitality

This domain drives cultural exchange, economic development, and global engagement through travel, heritage preservation, and world-class service experiences. It blends tradition, creativity, and professionalism to welcome and serve diverse populations.

Main domain Description

Scoop & meaning	Focuses on providing meaningful visitor experiences, managing cultural and heritage assets, planning events, and delivering exceptional hospitality services across tourism industries.
Prime Effort Required	Designing tourism packages, coordinating large events, managing hotels or cultural sites, and ensuring guest satisfaction across various touchpoints.
Work Environment	Involves working in hospitality venues, tourism boards, airlines, museums, resorts, and event companies. Requires cultural sensitivity, service mindset, and attention to detail.
Career Rewards and Benefits	Opportunities in global tourism networks, cultural diplomacy, event entrepreneurship, and leadership in international hospitality standards.
Key Skills and Personal Qualities Needed	Communication, cultural fluency, service orientation, planning, teamwork, and multitasking.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Heritage Management and Cultural Tourism	Protecting and promoting historic landmarks, museums, and local traditions.
2	Event Planning and Experiential Marketing	Organizing conferences, festivals, corporate events, and exhibitions with strategic messaging.
3	Hospitality Operations and Guest Services	Overseeing hotel, resort, and food services with emphasis on quality and customer satisfaction.
4	Travel Experience and Destination Management	Creating tourism strategies and enhancing visitor journeys to national or international destinations.
5	Sustainable and Eco-Tourism	Developing travel experiences that respect local communities and minimize environmental impact.
6	Airlines, Cruise Lines, and Transportation Services	Managing travel logistics and luxury services across aviation and maritime industries.

14. Political Sciences, Public Administration, and Diplomacy

This domain prepares professionals to lead in governance, policymaking, and international relations. It strengthens institutions, fosters diplomacy, and helps shape national and global strategies.

Main domain Description

Scoop & meaning	Focuses on understanding and influencing governmental systems, designing public policies, managing civic services, and representing national interests on the global stage.
Prime Effort Required	Analyzing political trends, writing policy briefs, engaging with citizens or diplomats, negotiating agreements, and managing civic programs or elections.
Work Environment	Work in government agencies, ministries, embassies, political consultancies, think tanks, or international organizations. Often requires discretion and strategic communication.
Career Rewards and Benefits	Leadership in national transformation, influence in global affairs, roles in public innovation, and participation in high-level diplomacy and civic planning.
Key Skills and Personal Qualities Needed	Integrity, analytical reasoning, negotiation, leadership, cross-cultural fluency, and public speaking.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Public Policy and Governance	Designing, implementing, and evaluating government programs that serve society's needs.
2	International Relations and Diplomacy	Representing national interests abroad and building peaceful multilateral cooperation.
3	Political Theory and Comparative Politics	Studying systems of government, ideologies, and decision-making frameworks worldwide.
4	Civic Engagement and Public Leadership	Empowering citizens and emerging leaders to participate in democracy and civic life.
5	E-Government and Smart Public Services	Digitizing public systems for efficiency, transparency, and citizen convenience.
6	Legislative Research and Political Strategy	Supporting elected officials through research, data, speechwriting, and campaign planning.

15. Protective Services, Security, and Crisis Management

This domain ensures safety, preparedness, and resilience in societies through law enforcement, emergency response, and national security efforts. It includes physical and cyber protection, disaster management, and conflict prevention.

Main domain Description

Scoop & meaning	Focuses on protecting lives, property, and public systems from threats or emergencies through proactive prevention, rapid response, and security strategy.
Prime Effort Required	Patrolling, conducting investigations, managing crisis response, developing safety protocols, or defending against cyberattacks and physical threats.
Work Environment	Work environments include police departments, military, emergency medical units, private security firms, and civil defense agencies. Often requires 24/7 readiness and coordination.
Career Rewards and Benefits	Public trust, leadership in safety policy, growth in cybersecurity and disaster planning, and active involvement in national resilience systems.
Key Skills and Personal Qualities Needed	Discipline, courage, decision-making under pressure, strategic awareness, teamwork, and ethical responsibility.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Law Enforcement and Public Safety	Maintaining order, enforcing laws, and protecting communities through police and community engagement.
2	Cybersecurity and Digital Protection	Preventing data breaches, hacking, and digital sabotage through cyber defense strategies.
3	Emergency and Disaster Response	Reacting to natural or manmade crises with coordination across health, rescue, and civil defense units.
4	Military Sciences and Defense Strategy	Protecting national interests through planning, intelligence, and advanced operational readiness.
5	Crisis Communication and Incident Command	Managing public information, media, and organizational response during emergencies.
6	Private Security and Risk Assessment	Protecting people, assets, and infrastructure in business, entertainment, or critical sectors.

16. Sales, Marketing, and Customer Engagement

This domain drives business growth through strategic promotion, consumer psychology, branding, and relationship-building. It adapts quickly to market trends, customer needs, and digital communication landscapes.

Main domain Description

Scoop & meaning	Focuses on identifying customer needs, building brand visibility, driving demand, and converting audiences into loyal buyers using both digital and face-to-face methods.
Prime Effort Required	Creating marketing campaigns, analyzing audience data, developing sales strategies, managing client relations, or launching new product promotions.
Work Environment	Found in every sector—retail, B2B, tech, services, healthcare, and beyond. Involves office settings, client visits, remote meetings, and data monitoring.
Career Rewards and Benefits	Incentives and earnings, entrepreneurial growth, global product influence, customer loyalty, and business leadership roles.
Key Skills and Personal Qualities Needed	Persuasion, adaptability, emotional intelligence, digital fluency, storytelling, and results orientation.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Digital Marketing and Analytics	Promoting products through search, social, email, and influencer channels with performance metrics.
2	Sales Strategy and Account Management	Developing pricing, territory, and retention strategies to grow sales and customer value.
3	Branding and Creative Campaigns	Building brand identity through messaging, visuals, and memorable campaigns.
4	Customer Relationship Management (CRM)	Using systems to monitor leads, nurture contacts, and provide excellent client service.
5	Retail and E-Commerce Sales	Managing product movement online and offline with focus on convenience, conversion, and customer care.
6	Public Relations and Reputation Management	Shaping brand image and handling public perception through media and stakeholder relations.

17. Life Sciences, Physical Sciences, and Research

This domain advances our understanding of the natural world—from living organisms to quantum particles. It fosters innovation in medicine, energy, environment, and materials through rigorous inquiry and experimentation.

Main domain Description

Scoop & meaning	Focuses on exploring and explaining natural phenomena through scientific investigation. Includes biology, chemistry, physics, and interdisciplinary research in labs, universities, and industry.
Prime Effort Required	Designing experiments, analyzing data, publishing findings, managing lab equipment, collaborating on global research teams, and applying for grants.
Work Environment	Found in academic institutions, pharmaceutical companies, research centers, clean energy firms, and government labs. May include both fieldwork and laboratory-based projects.
Career Rewards and Benefits	Scientific discovery, global research recognition, intellectual property creation, and contributions to public health, materials innovation, and sustainability.
Key Skills and Personal Qualities Needed	Analytical rigor, perseverance, curiosity, attention to detail, collaboration, and ethical integrity.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Biological and Biomedical Research	Studying cellular processes, genetics, and diseases to develop diagnostics, treatments, or vaccines.
2	Physics and Material Sciences	Investigating the behavior of matter and energy to create new technologies and materials.
3	Environmental and Earth Sciences	Monitoring ecosystems, geology, and climate to understand and protect the planet.
4	Chemistry and Chemical Engineering	Synthesizing compounds, analyzing substances, and designing processes for pharmaceuticals or materials.
5	Scientific Computing and Modeling	Using algorithms, simulations, and computational tools to test hypotheses and predict outcomes.
6	Interdisciplinary and Translational Research	Bridging science fields to apply lab discoveries to real-world applications, such as health tech or clean energy.

18. Transportation, Logistics, and Smart Mobility

This domain powers the global movement of people and goods. It is evolving through intelligent systems, green infrastructure, and integrated mobility solutions that reshape cities and economies.

Main domain Description

Scoop & meaning	Focuses on designing, managing, and optimizing systems for the movement of people, goods, and services using traditional, digital, and sustainable infrastructure.
Prime Effort Required	Planning supply chains, analyzing transport data, designing mobility hubs, automating delivery systems, and managing fleets or public transport operations.
Work Environment	Includes logistics companies, transport authorities, ports, airports, ride-sharing platforms, and mobility startups. Field-based and coordination-intensive.
Career Rewards and Benefits	Essential roles in trade, smart cities, and global supply chains, with innovation in automation, sustainability, and last-mile delivery.
Key Skills and Personal Qualities Needed	Systems thinking, logistics planning, tech-savviness, time management, spatial intelligence, and commitment to efficiency.

Description of each specialty (subdomain)

#	SUBDOMAIN	DEFINITION
1	Urban and Regional Mobility Planning	Designing citywide transport networks, walkability, and transit-oriented development.
2	Supply Chain and Logistics Management	Managing the storage, shipping, and tracking of goods from producers to consumers.
3	Sustainable and Electric Transportation	Developing clean vehicle systems, charging networks, and carbon-neutral transport policies.
4	Aviation, Maritime, and Port Operations	Overseeing air and sea cargo, airport logistics, and shipping efficiency.
5	Autonomous and Smart Vehicles	Creating driverless cars, delivery drones, and AI-driven transport platforms.
6	Public Transport and Shared Mobility	Improving buses, trains, metros, and ride-sharing systems for seamless commuter experiences.