



CONSTRUCTION AND IMPLEMENTATION OF AN INTELLIGENT CAREER
ASSESSMENT E-COMMERCE PLATFORM: A PRACTICE FRAMEWORK FROM
DEMAND SCENARIOS TO PROTOTYPE VALIDATION

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Abstract. In the overlapping context of local culture and the digital economy, combining career assessment tools with the logic of e-commerce platforms is becoming an important direction for improving career guidance and person-job matching services. This paper adopts a design science research approach and takes a WeChat mini-program-based intelligent career assessment e-commerce platform as its artefact. It proposes a three-stage practice framework moving from demand scenarios to system architecture and then to prototype validation. First, based on interviews and field observation, platform demand is structured into three representative scenarios educational progression, career adjustment, and institutional projects and corresponding assessment products and service bundles are designed. Second, following the idea of "assessment system + order system + channel system", a minimal yet complete platform prototype is implemented that integrates online assessment, automatic report generation, QR-code key activation, institutional back-end management, and basic channel analytics. Third, using small-sample pilot data (each project with fewer than 80 participants) from two schools and one career-education institution, the study calculates key indicators such as activation rate, completion rate, paid conversion rate, and self-reported decision clarity, and briefly illustrates how the platform is used in typical situations. Results suggest that the proposed platform design is technically feasible and operationally valuable for improving user self-understanding, service delivery efficiency, and channel conversion, while also revealing room for improvement in report expression, user journey design, and stakeholder incentives. The contribution of this study lies mainly in offering an actionable, mid-level pathway from local career assessment models to a workable minimum viable product, and in providing a structured blueprint for institutions planning similar platforms.

Keywords: intelligent career assessment, design, science research, e-commerce platform, new media operation, user journey, QR-code activation.

ИНТЕЛЛЕКТУАЛ КАСБИЙ ТАХЛИЛ ЭЛЕКТРОН ТИЖОРАТ ПЛАТФОРМАСИНИ
ЯРАТИШ ВА ЖОРИЙ ЭТИШ: ТАЛАБ СЦЕНАРИЙЛАРИДАН ПРОТОТИП
ВАЛИДАЦИЯСИГАЧА АМАЛИЙ МОДЕЛ

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Аннотация. Маҳаллий маданият ва рақамли иқтисодиёт бир вақтда ривожланаётган шарт-шароитда касбий тест синови воситаларини электрон тиҷорат платформаси мантиғи билан уйғунлаштириш касб танлашга қўмаклашиш

ва «инсон – иш ўрни» мослигини таъминлаш хизматларини яхшилашнинг муҳим йўналишларидан бирига айланмоқда. Ушибу мақолада дизайнга асосланган илмий тадқиқот (*design science research*) ёндашви қўлланилади ва тадқиқот объекти сифатида *WeChat* мини-дастурига асосланган интеллектуал касбий таҳлил электрон тижорат платформаси танланган. Муаллиф талаб сценарийларидан бошланиб, тизим архитектурасига ва прототипни синовдан ўтказиши босқичигача уч бўғинли амалий чизмани таклиф этади. Аввало, интервью ва майдон тадқиқотларига таянилган ҳолда платформадан фойдаланиш эҳтиёжлари учта намоён бўлган сценарийга ўқиши траекториясини режалаштириш, касбни ўзгартириш ва муассаса лойиҳаларига гуруҳланади ва ҳар бирига мос тест маҳсулотлари ҳамда сервис пакетлари ишлаб чиқилади. Кейин, «таҳлил тизими + буюртма тизими + канал тизими» тамоили асосида онлайн тест, автоматик ҳисббот яратиш, QR-код орқали фаоллаштириш, ташкилотлар учун орқа офис ва асосий канал аналитикасини бирлаштирган минимал, лекин тўлиқ прототип яратилади. Учинчи босқичда икки ўқув муассасаси ва бир касбий таълим ташкилоти иштирокида ўтказилган кичик пилот лойиҳалар (ҳар бири 80 иштирокчидан кам) маълумотлари асосида фаоллаштириш, якунига етказиши, тўланган конверсия каби асосий кўрсаткичлар ва қарор аниқлиги бўйича ўз-ўзини баҳолаш ҳисоблаб чиқилади ва платформадан фойдаланишинг оддий, лекин ҳаётий мисоллари қисқача ёритилади. Натижалар платформанинг техник жиҳатдан амалга оширилиши, фойдаланувчи ўзини англашини чуқурлаштириш, хизмат кўрсатиш самарадорлиги ва канал конверсиясини оширишдаги амалиётдаги қийматини кўрсатади, шу билан бирга ҳисббот тили, фойдаланувчи саёҳати ва иштирокчилар рағбатлантириш тизимини такомиллаштириш зарур бўлган йўналишларни очиб беради.

Калит сўзлар: интеллектуал касбий таҳлил, дизайн, илмий тадқиқот, электрон тижорат платформаси, янги медиа операцияси, фойдаланувчи саёҳати, QR-код орқали фаоллаштириш.

СТРОИТЕЛЬСТВО И ВНЕДРЕНИЕ ИНТЕЛЛЕКТУАЛЬНОЙ ПЛАТФОРМЫ ЭЛЕКТРОННОЙ КОММЕРЦИИ ДЛЯ КАРЬЕРНОГО ТЕСТИРОВАНИЯ: ПРАКТИЧЕСКАЯ МОДЕЛЬ ОТ СЦЕНАРИЕВ СПРОСА ДО ПРОТОТИПА

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Аннотация. В условиях одновременного развития местной культуры и цифровой экономики сочетание инструментов карьерной диагностики с логикой платформ электронной коммерции становится важным направлением совершенствования услуг по профориентации и обеспечению соответствия «человек – рабочее место». В статье используется подход дизайна научных артефактов (*design science research*), а в качестве объекта исследования рассматривается интеллектуальная платформа карьерного тестирования на базе мини-приложения *WeChat*. Предлагается трёхэтапная практическая модель, которая начинается с анализа сценариев спроса, затем переходит к проектированию системной архитектуры и завершается пилотной валидацией прототипа. Во-первых, на основе интервью и полевых наблюдений спрос на платформу структурируется в три типичных сценария образовательная траектория, карьерная корректировка и институциональные проекты, под каждый из них разрабатываются соответствующие линии отчётов и сервисные пакеты. Во-вторых, реализуется минимально достаточный прототип с архитектурой «система

тестирования + система заказов + система каналов», интегрирующий онлайн-тестирование, автоматическую генерацию отчётов, активацию по QR-кодам, личный кабинет для учреждений и базовую аналитику каналов. В-третьих, на основе данных малых пилотных выборок (каждый проект менее 80 участников) из двух учебных заведений и одной организации по карьерному образованию рассчитываются ключевые показатели коэффициенты активации, завершения, платной конверсии и самооценка ясности решения, также кратко описывается применение платформы в типичных ситуациях. Результаты показывают техническую реализуемость и практическую ценность предложенного решения для повышения самоосознания пользователей, эффективности оказания услуг и конверсии каналов, а также выявляют направления улучшения пользовательского пути и системы стимулов участников.

Ключевые слова: интеллектуальное карьерное тестирование, дизайн, научные исследования, платформа электронной коммерции, работа с новыми медиа, пользовательский путь, активация по QR-коду.

Introduction.

The rapid development of the digital economy is steadily reshaping labour markets, occupational structures and the way skills are valued. New industries and job roles keep emerging, which on the one hand widens the menu of choices for students and early-career workers, but on the other hand raises the information threshold, the cost of trial-and-error, and the anxiety that surrounds educational and career decisions. For schools and employers, the risk of misallocation in selection and placement also increases. In this environment, achieving more precise and more sustainable person-job and person-organization fit is no longer a theoretical slogan; it has become a very practical concern that shows up in classrooms, households and HR offices every day.

Career assessment is a key tool for connecting individual attributes with the world of education and work. Over roughly a century, practice has evolved from intuitive judgements to standardized scales, and from one-dimensional tests to multi-dimensional, integrated assessments. Yet in local practice, many mainstream career assessment products still face at least three challenges. First, the core theoretical models and instruments are usually rooted in Western cultural and institutional contexts. When they are transplanted into different social, family and school environments, their explanatory power and perceived relevance are often limited. Second, the prevailing service model is still “one-off assessment + static PDF report”. It looks at tools, not platforms, and seldom addresses how content creation, service delivery and user retention can be woven into a coherent digital service chain. Third, commercially, assessments are frequently treated as one-time tests or minor add-ons, instead of being designed as core components that can interact meaningfully with channels, content and counselling services.

Global reports reinforce this picture. The World Bank's World Development Report (2019) stresses that technological change is altering the nature of work and increasing pressure on education and training systems to equip people for more fluid careers. The OECD (2021) highlights that in such a changing world, accessible and continuous career guidance becomes a crucial public service for adults, and that digital tools can play an important role if they are properly embedded in guidance systems. Taken together, these analyses suggest a simple but demanding question: how can we translate these macro-level concerns into concrete, workable solutions at the level of platforms and services?

In my own platform practice, I have to admit that many issues which initially looked like “just design a questionnaire and generate a report” quickly turned into system-level questions: Can parents actually read and trust the output? Do school counsellors feel that this tool saves their time instead of creating extra work? Can institutions see clearly whether a

project is working or not? Without a platform perspective, single-shot tools rarely carry enough weight in real educational or career decisions.

Against this backdrop, this paper asks how a locally grounded intelligent career assessment e-commerce platform can be designed and implemented in a way that is technically realistic yet methodologically rigorous. Adopting a design science research (DSR) perspective (Hevner et al., 2004; Peffers et al., 2007), it treats a WeChat mini-program-based platform as a research artefact and focuses on three guiding questions:

Under local educational and labour-market conditions, how can we structure multi-stakeholder demand into a small number of representative scenarios that can guide platform design?

Under resource constraints, how can we build a minimal but complete platform prototype around assessment processes, orders and channel operations?

In small, real-world pilots with fewer than 80 participants per project, how does the platform perform in terms of user-level effectiveness, operational performance and early commercial feasibility, and what problems emerge along the way?

The rest of the paper is organised as follows. The next section briefly reviews relevant literature on changing work, career development, digital talent assessment and design science research. It is followed by the research methods, including the DSR framework, data sources and indicator definitions. The results and discussion section presents the demand scenarios, outlines the platform architecture and implementation, reports key pilot indicators and short cases, and then draws out managerial implications. The paper closes with conclusions and suggestions for future work.

Literature Review.

International organisations have produced extensive analyses of how technology and globalisation are changing work and skills. The World Bank (2019) emphasises that digitalisation and automation are reconfiguring tasks, increasing demand for non-routine cognitive and socio-emotional skills, and raising the stakes of educational and career decisions. The OECD's (2021) work on career guidance underlines that adults now need to navigate more frequent transitions, and that high-quality guidance services—including digitally supported ones—are central to ensuring fair access to opportunities. These macro-level perspectives provide an important backdrop for thinking about why smarter, more integrated career assessment services are needed.

In the field of career development and counselling, a number of theoretical frameworks focus on how people make sense of their careers in complex environments. Savickas' (2012) "life design" paradigm proposes that in the 21st century, career intervention should help individuals construct and reconstruct their life stories, rather than simply matching traits to occupational categories. Brown and Lent (2013), in their edited volume on career development and counselling, bring together social cognitive career theory, ecological perspectives and other models, highlighting the interplay between individual variables and contextual factors in career decisions. These perspectives suggest that assessment results have to be interpreted and used in context, often through conversation and reflection, instead of being treated as purely mechanical outputs.

Alongside these conceptual advances, a newer line of work focuses on digital talent assessment. Stander et al. (2022) propose a framework for digital talent assessment that addresses tool selection, data management and contextual application, and they pay particular attention to the balance between technological possibilities, organisational needs and ethical considerations. Vaughn (2023) and colleagues examine the potential use of social media data in assessment, noting both the richness of such data and the substantial risks related to privacy, bias and fairness. Together, these studies show that digitalisation is not

simply about moving old tests online; it raises new questions about data, ethics and the embedding of assessment in broader systems.

In information systems and digital service innovation, design science research has become a widely used paradigm. Hevner et al. (2004) propose a framework in which DSR cycles between a relevance cycle (focusing on the problem environment), a rigour cycle (drawing on the knowledge base) and a design cycle (building and evaluating artefacts). Peffers et al. (2007) translate this into a six-step process, including problem identification, objective definition, design and development, demonstration, evaluation and communication. This approach is particularly suitable when the goal is to both build an artefact that works and generate knowledge about how and why it works in context.

However, in the specific domain of career assessment and career education, there are still relatively few studies that take a platform or e-commerce perspective, and even fewer that present end-to-end DSR projects linked to real pilot implementations. Existing work tends to either concentrate on psychometric properties of instruments or discuss conceptual models for guidance systems, without fully addressing how local career assessment models can be transformed into operational digital platforms that can be run, measured and iterated. This paper aims to contribute to that middle layer between theory and practice.

Research Methods.

Design science research framework

This study follows a design science research paradigm and treats the intelligent career assessment e-commerce platform as a purposefully designed artefact intended to address a complex, ill-structured problem (Hevner et al., 2004). The research is structured around three interlinked cycles.

In the relevance cycle, the study identifies core pain points experienced by secondary and tertiary students, early-career workers, career practitioners and institutional organisers in assessment and guidance. This is done through a combination of literature review, semi-structured interviews and field observation in schools and partner institutions.

In the rigour cycle, the study draws on existing theories in career development and intervention (Savickas, 2012), frameworks for digital talent assessment (Vaughn et al., 2023), and design science research in information systems (Hevner et al., 2004). These sources inform concrete decisions about how to segment scenarios, design the architecture and configure processes, so that the artefact is not just ad hoc but anchored in a broader knowledge base.

In the design cycle, insights from the relevance and rigour cycles are integrated into the actual design and implementation of the platform prototype. The prototype is then deployed in small real-world projects, and feedback from these pilots is used to refine both the artefact and the underlying framework. This cycle is not linear; design, use and reflection overlap in practice.

Operationally, the research passes through three stages:

Demand scenario modelling – structuring multi-stakeholder needs into a small number of representative scenarios.

Platform architecture and process design – defining the technical and business architecture around assessment, orders and channels.

Prototype implementation and effectiveness evaluation – building a working mini-program and assessing its initial performance in small pilot projects.

Data sources and key indicators

The study uses three main types of data.

First, **platform log data** are collected from the mini-program back-end. These include, for each project within a defined time window, the number of distributed assessment cards or activation keys, the number of successful activations, the numbers of users who started and

completed assessments, the number of report openings, and the number of users who made at least one payment.

Second, **user questionnaires and short interviews** are used in selected projects. Participants are invited to rate their clarity of self-understanding and decision confidence before and after the assessment on simple scales, and to rate the comprehensibility and usefulness of the report. A small number of users take part in brief interviews about what they found most helpful or confusing.

Third, **institution and practitioner interviews** are conducted with school project leaders, career teachers and counsellors in partner institutions. These semi-structured interviews explore project organisation, report interpretation, follow-up services and perceived areas for platform improvement.

To enable cross-project comparison, several key operational indicators are formally defined. Let

To enable cross-project comparison, several key operational indicators are formally defined. Let:

$N_{distributed}$: number of distributed assessment cards or activation keys;

$N_{activated}$: number of successfully activated users;

$N_{started}$: number of users who started the assessment;

$N_{completed}$: number of users who completed the assessment;

N_{paid} : number of users who made at least one payment during the evaluation period;

N_{all} : total number of users who reached the platform entry during the evaluation period.

Then:

$$r_{act} = N_{activated} / N_{distributed} \times 100\% \quad (1)$$

$$r_{comp} = N_{completed} / N_{started} \times 100\% \quad (2)$$

$$r_{conv} = N_{paid} / N_{all} \times 100\% \quad (3)$$

represent the activation rate, completion rate, and paid conversion rate, respectively. These ratios are calculated directly from platform log data.

At a more abstract level, the platform's comprehensive effectiveness E within a given project cycle may be conceptualized as:

$$E = \Delta O / C \quad (4)$$

where ΔO denotes the increment in "valuable outcomes" attributable to the platform (e.g., improvement in self-understanding clarity, increased decision certainty, strengthened institutional cooperation), and C denotes the total costs incurred to achieve these outcomes (time, organizational effort, and direct financial costs). Formula (4) is a conceptual expression; the specific indicators used in Sections 4 and 5 can be regarded as operationalizations and decompositions of ΔO and C .

Analytically, the study focuses on descriptive statistics, comparative analysis between projects, and qualitative case analysis. Given the limited sample size and exploratory nature of the pilot, no complex causal modelling is attempted.

Analytical approach and limitations

Given the small scale of the pilots (each with fewer than 80 participants), the analysis focuses on descriptive statistics, simple comparisons across projects, and short case illustrations. No complex causal modelling is attempted. The goal at this stage is not to prove strong causal effects on long-term academic or career outcomes, but to answer more basic questions: Can the platform run stably? Are activation and completion rates acceptable for the target groups? Do users and institutions feel that the reports and processes are understandable and usable?

From a very practical point of view, this step often matters more than we expect. If a platform cannot reliably get students from "scan a code" to "see a report", or if counsellors feel

that they have to fight with the system to do simple tasks, then sophisticated statistical models will not save the project.

The limitations are clear. Samples are small and geographically concentrated; self-reported changes in clarity and confidence are subjective; and some higher-level functions, such as recommendation engines and group profiling, remain at the design stage. For these reasons, the findings should be interpreted as evidence on feasibility and pathways, not as definitive proof of impact.

Results and Discussion.

Demand scenarios and user segments

Based on fieldwork with upper-secondary and tertiary students, early-career workers, career counsellors and institutional representatives, demand for the platform can be structured into three representative scenarios: educational progression, career adjustment and institutional projects.

In the **educational progression scenario**, typical users are students facing subject, major or institution choices. Many of them feel that they “do not really know what fits” and find themselves caught between their own impressions, parental expectations and exam-based constraints. The platform is expected to provide structured reports that combine interests and personality into a language that students and parents can share, so that family discussions move from vague impressions to more grounded conversations.

In the **career adjustment scenario**, typical users are early-career workers who are dissatisfied with their current jobs or development prospects and are considering a change of position or industry. They usually have some accumulated work experience but are unsure whether the problem lies in the content of the job, the culture of the organisation, or simply their own stage in life. Here, the platform’s role is to connect personality patterns and career values with the characteristics of different fields and roles, helping users identify a few realistic and better-fitting directions instead of jumping blindly between labels such as “internet industry” or “education sector”.

In the **institutional project scenario**, users are schools, career-education providers or training institutions that need to organise group assessments or guidance projects. Their practical concerns are very concrete: how to distribute and track codes, how to avoid manual data entry, how to generate summary results, and how to reduce the coordination burden on teachers and staff. For them, the platform has to provide bulk activation, list management and dashboard views that make projects manageable with limited human resources.

These three scenarios, taken together, outline a compact but representative landscape of how an intelligent career assessment platform can be used in a local context. They also directly shape decisions about which products to design, which processes to standardise and which features to postpone.

Platform architecture and prototype implementation

Technically, the platform adopts a “WeChat mini-program + cloud service” architecture. This choice keeps development and maintenance costs manageable by leveraging an existing ecosystem familiar to most users. In business terms, the platform is organised around three subsystems:

An **assessment system**, which supports multiple questionnaires, online completion, basic item randomisation and logical controls.

An **order system**, which handles product and package configuration, payment and verification, and supports single assessments, bundles and “assessment + consultation” packages.

An **channel system**, which generates and manages QR-code keys, records scans and traffic sources, and produces simple channel reports.

Report and service design emphasises productisation. Internally developed local models are externalised as three report lines: a career interest report, a career personality report and

a career values–industry fit report. These can be combined into scenario-oriented packages, such as a “study-path planning package (interests + personality)” for students facing high-stakes school or major choices, or a “career adjustment package (personality + values–industry fit)” for workers considering a move.

All reports follow a common structure: an executive summary, dimension profiles, contextual interpretation and next-step recommendations. The last part lists three to five concrete suggestions, such as questions to discuss with parents, types of majors or industries to explore, or simple next actions (for example, “talk to a teacher who is actually doing this work”). This is intended to lower the threshold for applying the results, especially for users with limited psychological literacy.

In addition, counsellors and partner institutions can create “assessment + consultation” service bundles on the platform. After payment, users see both their assessment history and consultation records in the mini-program, while counsellors can view corresponding orders and basic profiles in a back-end interface. This turns the platform into an integrated infrastructure for tools, services and transactions, instead of a loose collection of tests.

From a design standpoint, the prototype deliberately keeps its scope “small but complete”: it must support the full path from entry, through activation and assessment, to report, payment and basic analytics. More sophisticated features, such as AI-based recommendations or chatbots, are consciously left for later iterations.

User journey and integrated channel path

The user journey is designed to connect online and offline channels through QR-code keys and new-media content. Online, career counsellors or institutional partners publish short career-education videos or articles via WeChat video-channels and official accounts, embedding mini-program entry points that lead directly to specific assessments or packages. Offline, schools and institutions distribute printed assessment cards, posters or leaflets with QR-codes; scanning a code takes users to an activation page and automatically binds the relevant assessment or package, avoiding manual entry of serial numbers.

Users complete assessments on their phones and can view reports immediately. If they wish, they can then book one-on-one counselling, either online or face to face. With users’ consent, counsellors access reports and basic information via a dedicated back-end. Throughout this process, key user actions—such as scanning, entering the mini-program, starting and completing assessments, opening reports and making payments—are recorded in the back-end database and summarised through simple dashboards.

This design provides the technical foundation for an integrated “content – assessment – consultation” path. It allows channel operations to move beyond vanity metrics such as views and likes towards more meaningful indicators like activation, completion and paid conversion, all within a single back-end view.

Pilot projects and key indicators

During the prototype phase, the platform was piloted in three small projects, each with fewer than 80 participants: one upper-secondary school class, one vocational college class and one event organised by a career-education institution. For reasons of confidentiality, names are anonymised and data are summarised at an aggregate level.

In the upper-secondary school project (“School A”), 60 students received assessment cards linked to a study-path planning package. Under conditions of teacher explanation and in-class organisation, approximately 56 students activated the platform (ract≈93%r_{act} \approx 93\%), 54 started the assessment and 52 completed it (rcomp≈96%r_{comp} \approx 96\%). Report open rates were close to 100%, and the average rating for “the report helps me see which directions suit me better” was 4.4 on a 5-point scale. About two-thirds of students indicated that their intended major choices were “clearer than before”.

In the vocational college project (“College B”), 55 students participated in a single-assessment activity organised by a student affairs office. Around 50 participants activated the platform ($ract \approx 91\%$), 47 completed the assessment ($rcomp \approx 94\%$), and report satisfaction averaged 4.2 out of 5. Roughly 60% of respondents reported higher decision clarity regarding future job types or practice placements.

In the career-education institution project (“Institution C”), a small “Grade 12 study-path talk” was combined with online promotion. Approximately 70 students and parents scanned QR-codes or clicked links in advance or on site; about 60 users activated assessments ($ract \approx 86\%$), 47 completed assessments ($rcomp \approx 94\%$), and report satisfaction averaged 4.2 out of 5. Roughly 60% of respondents reported higher decision clarity regarding future job types or practice placements.

These numbers are modest but informative. They suggest that, even with small groups, the combination of QR-code activation, in-person explanation and structured reports can achieve high activation and completion rates, as well as reasonable satisfaction. At the same time, the small sample sizes and short follow-up windows limit what can be inferred about longer-term impacts.

Short case illustrations

To illustrate how the platform is used in real situations, three brief cases are summarised here in a simplified way. All identifying details are changed.

In the first case, an upper-secondary humanities student was unsure whether to choose teacher-training majors or a broader social-science track. The interest report highlighted social and expressive tendencies, while the personality report indicated a preference for structured, predictable environments. During a short feedback conversation, the school career teacher used these results to compare teacher-training, public administration and social-work options within a single frame. The student later reported feeling “more at ease” about putting education-related majors among the top choices.

In the second case, an early-career administrative worker in a manufacturing firm considered moving into the internet or education sectors. Her personality profile showed high initiative and openness to change but low tolerance for intense interpersonal conflict; her values profile placed strong weight on growth and autonomy. The counsellor used the platform’s values–industry fit patterns to discuss the realities of different roles and guided her attention towards education-related positions that combined learning opportunities with helping others. Several months later, she joined a vocational education institution and reported higher subjective satisfaction, even though her salary had not changed dramatically.

In the third case, a small career-education institution organised a study-path talk for Grade 12 students. Two short videos on interests and personality were released via WeChat video-channel in advance, and assessment cards with QR-codes were distributed at the event. Platform logs later showed that both content-driven clicks and on-site scans contributed to activations. For the institution, the activity generated immediate service revenue and helped identify families interested in deeper guidance; for the platform, it demonstrated that content and QR-codes can work together to bring a manageable flow of users into the system.

These cases are intentionally kept simple. They do not claim spectacular transformations; instead, they show how, in ordinary choices, structured reports and short conversations can take some of the fog out of decisions.

Managerial implications and limitations revisited

The pilot results and case illustrations point to at least three managerial implications.

First, scenario-driven product and architecture design appears essential. Educational progression, career adjustment and institutional projects differ substantially in user tasks, payers and success criteria. Trying to address all three with a single generic assessment and

no scenario logic is unlikely to succeed. Designing at the scenario level helps keep the functional scope “small but precise” and improves alignment with real needs.

Second, an integrated “assessment – content – consultation” path can improve the controllability of the service loop. By linking video content, QR-code activation and mini-program entries into one data trail, institutions can track user flows from exposure to completion and purchase within a single back-end. This makes it more feasible to learn from practice and to adjust channels based on evidence rather than intuition alone.

Third, platform governance and incentive mechanisms are critical for sustainability. Even in small pilots, it is easy to observe a potential tension between commercial pressure (for example, selling more consultations) and professional standards. If counsellors or agents are rewarded only for volume, there is a risk of over-selling at the expense of quality. Combining revenue-sharing with user satisfaction and complaint indicators, and establishing clear rules for model versioning, data protection and dispute resolution, can help to balance “open collaboration” with “quality control”.

At the same time, the limitations of this study must be emphasised. All pilots involve fewer than 80 participants and are located in specific regions; data on long-term outcomes such as academic achievement or career trajectories are not available; and the platform’s more advanced functions remain untested. Therefore, the findings should be interpreted primarily as early evidence regarding feasibility and design choices. They can inform the next round of design and research but do not replace the need for larger and more rigorous studies.

Conclusion and Recommendations.

Using a design science research approach, this paper has proposed and implemented a three-stage practice framework—demand scenarios, system architecture and prototype validation—for the construction and roll-out of an intelligent career assessment e-commerce platform. Grounded in local practice and international literature, the study shows how a minimal but complete platform can be built around a WeChat mini-program, how three representative demand scenarios can guide product and process design, and how small pilot projects can be used to obtain an initial picture of user-level and operational performance.

On the demand side, structuring needs into educational progression, career adjustment and institutional projects provides a clear starting point for platform design. It allows designers and institutions to talk concretely about “who is using what, in which situation, and for which decision”, instead of trying to serve an abstract, undifferentiated “general user”.

On the system side, a “mini-program + cloud service” architecture centred on an assessment system, an order system and a channel system offers a realistic path under resource constraints. The integration of QR-code keys and new-media traffic into an end-to-end “content – assessment – consultation” path significantly improves the transparency and measurability of channel operations.

On the operation and governance side, the sustainable development of an intelligent assessment platform depends not only on the technical quality of tools but also on platform-level governance and stakeholder incentives. Combining revenue-sharing schemes with user-experience metrics and maintaining clear rules on data protection and model updates can help keep the platform from drifting into either pure commercial opportunism or rigid bureaucratic control.

For practitioners, three suggestions follow.

Institutions interested in similar platforms should begin with a limited set of clearly defined scenarios and service pathways, rather than attempting to design an all-encompassing system from the outset. Starting smaller often makes it easier to deliver real value and to learn.

During system development, channel analytics and reporting capabilities should be treated as core features. Without them, it is very hard to manage projects, improve operations or convince stakeholders that the platform makes a difference.

When working with agents and counsellors, professional ethics and service norms should be built into cooperation agreements and performance metrics, so that commercial incentives do not undermine the credibility of assessment and guidance.

Future research can extend this work in at least two directions. One is to conduct larger, longer-term empirical studies that track how platform use relates to academic pathways, career satisfaction and person–job fit outcomes. Another is to explore advanced features such as machine-learning-based recommendations and group profiling on top of the current architecture, moving gradually from a “tool + channel” combination towards a more comprehensive, data-driven decision-support infrastructure for learning and career development.

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