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From Outcomes to Capabilities: Reconceptualising the Assessment of Career Transition Quality among Vocational College Students in China

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Abstract: Outcome indicators such as employment status, earnings and study–job match capture realised destinations but may obscure the unequal opportunities shaping Chinese higher vocational students' career transitions. This conceptual article develops a capability-informed framework for assessing transition quality alongside, rather than instead of, conventional outcomes. Drawing on Sen's distinction between capabilities and functionings, Hart's account of aspiring and realising aspirations, and Career Construction Theory, we distinguish two proposed evaluative dimensions: the opportunity to formulate a valued career direction and the opportunity to pursue it. Career aspiration, career engagement and career decision-making difficulty are proposed as indirect, context-dependent observations, not direct measures of substantive freedom. Career adaptability is treated as a personal conversion resource; family, institutional and labour-market conditions as social conversion conditions; and regional economic and industrial conditions as environmental conversion conditions. The framework derives three provisional propositions and three principles for assessment design. It requires longitudinal measurement, documentation of available and blocked options, and student accounts to guard against mistaking constrained choices for freely chosen preferences. Its conceptual mappings and measurement properties have not been empirically validated. The framework offers an equity-sensitive complement to outcome measures and a specific agenda for participatory and empirical testing.

Keywords: capability approach; career transition capability; career adaptability; vocational education

1. Introduction

The transition from higher vocational education into employment or continued study constitutes a pivotal developmental passage for a substantial student population. In Chinese higher vocational education, progression to further study and entry into work are distinct possible routes, rather than two transitions necessarily experienced by every student [1–3]. The manner in which the quality of these transitions is conceptualised and assessed bears directly upon institutional practice and the forms of support available to students.

Prevailing approaches to transition assessment rely predominantly on episodic outcomes—whether graduates secure employment, the salaries they obtain, the satisfaction they report, or the degree of alignment between their occupation and field of study [4]. Such indicators are intuitively accessible, suitable for cross-cohort comparison, and congruent with institutional accountability imperatives, and they feature prominently in graduate evaluation. These outcome-oriented approaches are, however, insufficient when used alone for vocational college students. Under the structural constraints confronting this population, realised outcomes can reflect opportunity structures as well as students' development, and a single outcome metric cannot accommodate the heterogeneity of their post-graduation destinations (see Section 2).

The capability approach furnishes a conceptual basis for redefining transition quality. By distinguishing capabilities from functionings, it redirects the evaluative focus from what students ultimately do to the valuable paths that are genuinely open to their choice, and it provides a critical lens on discourses that equate successful transition with absorption into the labour market [5,6]. The two capabilities advanced by Hart [7]—the capability to aspire and the capability to realise aspirations—lend this evaluative reorientation concrete, empirically approachable content.

Existing work has introduced the capability approach to career development, yet a population-specific assessment architecture that connects the capabilities to aspire and to realise aspirations with conversion conditions and an explicit observation strategy for Chinese higher vocational students remains insufficiently specified [5,8,9]. This is a conceptual gap identified from the literature discussed here, not a claim based on an exhaustive systematic search. Robertson and Egdell [5] call for career-relevant resources and a temporal perspective. We therefore explore whether Career Construction Theory can contribute a developmental account and career adaptability as a possible conversion resource, while retaining the capability approach's distinct evaluative focus on

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substantive opportunities. The paper does not claim that career adaptability alone captures opportunity sets or that prior capability-based career frameworks do not exist.

This study develops a conceptual framework for Chinese higher vocational students' transitions by asking three questions: (1) Why are outcome indicators insufficient to assess transition quality? (2) Which capability dimensions should inform assessment? (3) How do conversion conditions shape these dimensions, which observations are informative, and how should the observations be interpreted?

The study advances three contributions. First, it reconstructs the criterion of transition quality from realised outcomes to capabilities, and proposes an additional evaluative perspective for structurally disadvantaged students. Second, it integrates the capability approach (incorporating Hart's two capabilities) with Career Construction Theory, responding to the operational needs identified by Robertson and Egdell [5]—namely a conception of resources and a temporal dimension—and, by positioning career adaptability as a conversion factor, addressing a proposed gap in conversion-factor analysis noted in the literature [9]. Third, it proposes observed concepts, three assessment propositions, and assessment design principles, informed by an explicit equity orientation.

2. Background: Vocational College Students' Career Transitions and the Assessment Dilemma

2.1 The challenges of vocational college students' career transitions

Vocational students may face divergent transition routes, including work, further study and periods of uncertainty. Educational credentials can function as recruitment signals: a Chinese résumé field experiment demonstrated differentiated treatment by educational background, although its applicant comparison did not directly isolate vocational versus bachelor's graduates [10]. A survey of 983 Chinese higher vocational students reported intentions to pursue a bachelor's degree, enter work or remain undecided, illustrating why a single employment indicator can conceal different trajectories [11]. Among 893 higher vocational students, perceived discrimination was negatively associated with career exploration in a cross-sectional survey; this evidence does not establish that discrimination caused lower adaptability [12]. Research on career decision-making in Chinese higher vocational colleges describes relevant decision processes [13]. A qualitative study of students in two Chinese vocational colleges describes the intersection of educational hierarchies, stigma and students' aspirations and agency; findings from these institutions do not establish nationwide prevalence [14]. Together, these observations motivate assessment of opportunities available to individual students without assuming that all vocational students experience the same disadvantage.

2.2 Existing outcome-oriented assessment and its limitations

Outcome-oriented assessments commonly use employment rates, starting salaries and study–job match [15–17]. These indicators facilitate comparison but have three limitations for vocational students. First, observed destinations reflect both educational development and unequal opportunities, potentially conflating institutional contributions with labour-market constraints [15]. Second, a single employment metric cannot represent transitions into work, further study or other valued routes. Third, a realised destination is a functioning, not evidence of the complete set of feasible alternatives. Identical unemployment outcomes may reflect a freely chosen period of study, blocked job applications or both. The task is therefore to supplement outcome measurement with contextualised evidence about opportunities students have reason to value, rather than infer transition quality from destinations alone.

3. Methods

This is a conceptual article that adapts and synthesises two theoretical traditions to propose an assessment framework; it is not a systematic or scoping review and reports no primary empirical data. In line with guidance on conceptual articles [18,19,20], its logic proceeds through three analytical tasks: defining an evaluative object, mapping proposed constructs and conversion conditions, and deriving propositions with explicit validity limits. The sources cited serve as theoretical and illustrative support rather than an exhaustively identified evidence corpus; no systematic database search, screening protocol or formal quality appraisal was undertaken. Consequently, absence-of-prior-work claims and empirical generalisations are deliberately qualified, and the propositions in Section 5 are not presented as tested findings.

3.1 Theoretical clarification

The first step entails theoretical clarification, establishing shared terminology and delineating the role of each theory within the subsequent analysis. The paper draws upon two theoretical traditions. The first is the capability approach, encompassing both Sen's overarching evaluative framework and Hart's interpretation of aspiring and realising aspirations. The two belong to a single intellectual lineage, although Hart's developmental interpretation is not interchangeable with Sen's capability set. The second is Career Construction Theory, employed here to supplement the capability approach's treatment of agency and process mechanisms. The specific rationale for incorporating Career Construction Theory, together with the points of convergence and divergence between the two theories, is elaborated in Section 4.

3.2 Conceptual integration and criteria for selecting observed concepts

The integration assigns separate analytical tasks to the theories: the capability approach defines what should count as valuable freedom, whereas Career Construction Theory suggests developmental resources

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and responses that may affect access to valued pathways. Candidate observations were judged conceptually against three criteria: whether they relate to aspiration formation or pursuit, whether they are relevant to the vocational transition, and whether they add distinct information about direction, action or decision obstacles. These criteria justify a provisional selection, not a demonstrated optimal set of indicators. Alternatives, including directly elicited feasible options, student-defined valued goals and institutional opportunity records, remain necessary for interpreting the psychological observations; their omission from a numerical model would be a validity threat.

3.3 Framework construction and proposition generation

The resulting framework separates the evaluative dimensions (aspiring and pursuing), indirect observations, conversion conditions and realised destinations. The correspondence is discussed in Sections 4–5 and summarised in Figure 1 and Table 1; the propositions express claims to be challenged by future empirical and participatory research. A central internal check is that an observation can take the same value under different opportunity structures: low engagement may reflect either disengagement or restricted access, and low decision difficulty may reflect either informed choice or prematurely foreclosed options. This check rules out treating a psychological score as an unqualified capability score. Because the analysis is conceptual, the proposed mapping should be considered transparent and revisable rather than empirically reproducible.

4. Theoretical Foundations

4.1 The capability approach

The capability approach was formulated by Sen within welfare economics and development studies as an alternative to evaluative traditions premised on utility or resource holdings [21]. Its foundational claim holds that the evaluation of individual well-being should take as its informational basis the substantive freedoms individuals actually enjoy—that is, whether they are able to lead the kind of lives they have reason to value—rather than resting solely on realised outcomes or possessed resources [21]. The approach has since been applied extensively across the domains of development, education, health, equality and human rights, and employment activation, establishing itself as a major analytical framework for evaluating individual well-being and opportunity [5,22]. Its conceptual architecture comprises several interlocking building blocks. Commodities (the material and non-material conditions at a person's disposal) are converted, via conversion factors, into functionings (the states and activities a person actually achieves); capabilities denote the substantive freedoms a person possesses to achieve the functionings he or she has reason to value. Functionings thus represent what has been done and been; capabilities represent the freedom to do and to be.

A concrete illustration makes the distinction intuitive. Consider two vocational graduates, both unemployed six months after graduation. The first may be deliberately preparing for a feasible progression examination, whereas the second may have applied extensively without receiving an offer. Their employment statuses are identical, but information on available routes, financial feasibility, refusals and the students' own priorities is needed to determine whether their substantive opportunities differ. An assessment confined to outcomes would treat the two as equivalent; the capability approach would not.

Understanding how capabilities are formed requires two further core elements [21,22]. The first is conversion factors. Resources do not translate into capabilities automatically; the degree of conversion is mediated by conversion factors. Robeyns [22] distinguishes three types—personal factors, such as health and psychological states; social factors, such as institutions, norms, and discrimination; and environmental factors, such as geography, transport, and infrastructure. Two individuals possessing identical resources may therefore diverge substantially in capability. The second is adaptive preference. Sen [21] observes that individuals in persistently disadvantaged circumstances tend to adjust their desires and expectations downward to align with their situation; evaluating their well-being solely through self-reported aspirations or satisfaction therefore systematically understates the extent of their deprivation. This concept is directly relevant to the present framework, as it implies that students' self-reported career aspirations cannot be taken at face value, since low aspirations may be artefacts of restricted opportunity rather than expressions of genuine preference, and this provides one of the theoretical foundations for the aspiration interpretation rule advanced in Section 5 (Proposition 3). Finally, the position of agency requires clarification. It belongs to neither of the foregoing elements but stands as a further foundational concept alongside substantive freedom, referring to an individual's capacity, as an actor, to pursue actively the goals he or she has reason to value [21]; the discussion of the action facet in Section 5.2 connects to this concept.

Although Sen developed the approach as a general framework, its relevance to the career domain has been argued by several scholars [5,8]. A satisfactory career outcome cannot be reduced to employment or income but concerns an individual's freedom to pursue work he or she has reason to value. The approach has simultaneously been critiqued as insufficiently specified for career applications—it does not prescribe which capabilities should be prioritised in assessment, capabilities themselves resist direct measurement, and it lacks the temporal dimension career development requires [5]; the conversion factors shaping career-related capabilities also remain under-analysed [9]. The present paper responds directly to these critiques.

It is also necessary to make explicit how capabilities can be assessed at all, as this constraint determines the observation strategy that follows. A major measurement challenge is that the full set of substantively feasible options cannot be read directly from observed behaviour [5,23]. The present framework accepts this constraint. Capability is a freedom rather than an observable behaviour, and it can be inferred partly from

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observed concepts, corroborated by evidence about feasible and foreclosed alternatives and students' stated values. Throughout this paper, observed concepts are empirically assessable constructs selected as indirect traces of capability; outcome indicators denote conventional outcome metrics, whereas measures, instruments, and items refer to empirical operationalisation. Such inference is not guaranteed, as an identical observed value may correspond to more than one capability state, and Sen cautions that subjective indicators deployed in isolation can mislead, because individuals in deprivation adjust their expectations to match their circumstances [21]. For this reason, an explicit and appropriately cautious observation strategy is required—and this is what Hart's work, presented next, provides.

4.2 Hart's two capabilities

Working within the capability approach, Hart has sought to operationalise the abstract concept of capability for concrete analyses in education and social justice. Building on Sen's capability approach and Bourdieu's sociology, she attends specifically to how aspirations are formed within unequal social structures [7,24]. On this basis, Hart [7] proposes two capabilities, the capability to aspire and the capability to realise aspirations. The capability to aspire takes up the concept of the same name advanced by Appadurai [25]—a developed ability to envisage a valued future and to apprehend the steps required to move towards it. Appadurai observes that this ability is unevenly distributed—the more opportunities individuals have to witness how aspirations are progressively realised, the more fully this capacity develops. The capability to realise aspirations, in turn, refers to the substantive freedom and ability, given one's resources, opportunities, and social position, to translate a valued future into action and to pursue it.

Hart's work links the formation and pursuit of aspirations with unequal social circumstances [7,24], offering a developmental lens for this article. However, a developed ability to envisage a future and Sen's capability set—the genuinely achievable combinations of functionings—are not equivalent. We therefore use "capability to aspire" and "capability to realise aspirations" as proposed evaluative dimensions informed by Hart, not as directly measurable psychological traits or a complete representation of Sen's option set. The selected psychological constructs describe possible manifestations of those dimensions; they do not establish freedom without contextual corroboration. Adaptive preferences may alter aspiration reports, but a low aspiration cannot alone demonstrate that adaptation has occurred [7,21,26].

The developmental reading is adopted for three reasons. First, the object of assessment is an unfolding educational and career transition, in which the ability to envisage and navigate towards valued futures is itself developable rather than a fixed endowment [7,24,25]. Second, a strict option-set formulation would require identifying the counterfactual functionings genuinely open to each student. These opportunity sets cannot be inferred from an observed destination and may change as progression routes, credential requirements, and regional labour markets change [5,23]. Third, the Hart–Appadurai reading makes a practice-oriented, longitudinal assessment analytically tractable without equating psychological scores with capability. Career aspiration, career engagement, and career decision-making difficulty are therefore treated only as indirect empirical traces, to be interpreted alongside conversion conditions and information on realised and foreclosed options. This is a context-specific operational adaptation of Sen's evaluative framework, not a claim that the observed concepts exhaust capability.

An example situated in the vocational college context serves to differentiate the two capabilities. Two students both aspire to become preschool teachers and have each formulated a clear goal (both report an aspiration, without this alone proving an equal capability to aspire). One is able to enrol in the relevant courses, obtain the requisite qualification, and secure an internship, thereby acting concretely towards the goal; the other, constrained by family financial pressure, must commence paid work immediately, and relevant positions are scarce locally, rendering the same aspiration virtually impossible to pursue. The example suggests potentially different opportunities to pursue the same goal, but neither dimension can be established from aspirations and destination alone. Maintaining the distinction prevents having an aspiration from being conflated with possessing the freedom to realise it.

The capability approach is reluctant to prescribe a fixed list of capabilities and maintains that capability selection should be a participatory rather than an imposed process [5]. As regards the selection of capabilities, multiple viable combinations exist. For example, Egdell and McQuaid [27] identified three capabilities among disadvantaged young people—capability for work, capability for learning, and capability for voice. The present paper adopts the capability to aspire and the capability to realise aspirations on the basis of a reasoned judgement. The core of the career transition resides in two questions—whether a valued direction can be formed and whether there is freedom to pursue it—which correspond to Hart's [7] two capabilities and echo the distinction in the school-to-work transition literature between aspiration formation and aspiration attainment [2]. They are therefore advanced as an analytically grounded, revisable proposal amenable to participatory validation with students and institutions, rather than as a closed or value-laden prescription; the two capabilities concern the freedom to form and pursue paths that students themselves have reason to value, and remain neutral as to which path that should be.

4.3 Career Construction Theory and career adaptability

Section 4.2 established the object of assessment—the capability to aspire and the capability to realise aspirations. The ensuing question concerns how these two capabilities are formed, which directs attention to conversion factors and, in particular, to career adaptability as a personal conversion factor. The incorporation of Career Construction Theory into the capability framework rests on two grounds. First,

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proponents of the capability approach contend that it cannot function in isolation and must be hybridised with complementary perspectives, specifying in particular that its application to careers requires the addition of a career-relevant conception of resources and a temporal dimension [5]; career adaptability can supply the former, and the developmental, process-oriented account of Career Construction Theory can supply the latter. Second, Career Construction Theory and its core concept, career adaptability, have been studied among Chinese undergraduates and vocational students, but the evidence cited covers different populations and must not be treated as uniformly representative of higher vocational students [28–30]. The fundamental premise of Career Construction Theory is that a career is not predetermined but is progressively constructed by the individual through meaning-making in continuous interaction with the environment [31]. Within this process, individuals require a set of self-regulatory psychosocial resources to navigate transitions and challenges; this set of resources constitutes career adaptability.

Career Construction Theory conceptualises career adaptability as a set of self-regulatory psychosocial resources [31] comprising four dimensions—concern, control, curiosity, and confidence—and embeds it within an adaptation model running from adaptive readiness, through adaptability resources and adapting responses, to adaptation results. Within this account, adaptability is not a fixed trait but a resource that develops through experience and mediates between an individual's circumstances and his or her responses. In the adaptation model, adaptability resources are positioned upstream of adapting responses and adaptation results; this structural position motivates, but does not validate, positioning adaptability as a personal conversion resource rather than the evaluative endpoint.

The present study positions career adaptability as the core personal conversion factor within the capability framework. Adaptability is the psychosocial resource through which students convert available resources into the two capabilities. This positioning accords with the internal architecture of Career Construction Theory, in which contextual and structural factors are treated as conditions shaping the adaptation process rather than as components of adaptability itself. Treating adaptability as a conversion factor rather than as the focal outcome distinguishes the present framework from studies that examine adaptability as a dependent or focal variable.

Positioning adaptability as a conversion factor necessitates its differentiation from the capabilities it enables. Career adaptability is a self-regulatory psychosocial resource available for managing a transition, whereas career aspiration concerns orientation towards a valued future, career engagement concerns enacted career behaviours, and career decision-making difficulty concerns obstacles experienced in choosing and committing. At the proposed explanatory level, adaptability has a nested rather than contradictory role: social conditions may shape adaptability and capability observations through distinct paths on those observations. A resource and its exercise are therefore not equivalent—a student may possess adaptability resources yet, under constraint, fail to convert them into enacted pursuit. At the operational level, studies should use non-overlapping item wording and distinct temporal frames, compare correlated-factor models with alternatives that collapse adjacent constructs, and inspect cross-loadings and heterotrait–monotrait ratios if structural relationships are subsequently tested. Recent evidence indicates that career adaptability and career engagement can be modelled as empirically distinct constructs [32], although this distinction should be re-examined among Chinese vocational college students.

4.4 Compatibility of the capability approach and Career Construction Theory

The two theories share substantial common ground. Both conceptualise development as a process rather than a fixed endowment, and both situate agency within, rather than outside, social and structural contexts. Career Construction Theory's view of careers as jointly constructed through person–environment interaction parallels the capability approach's concern with the conversion of resources under specific conditions, and career adaptability maps naturally onto the role of a personal conversion factor. The two are moreover complementary in what they provide. Career Construction Theory offers a mature account of the agency and self-regulatory mechanisms through which individuals engage transitions, while the capability approach provides an evaluative space (the capability–functioning distinction) and a structural perspective that career theories frequently leave implicit.

One divergence must nonetheless be acknowledged. The capability approach explicitly critiques accounts that individualise responsibility for outcomes, whereas Career Construction Theory, with its emphasis on individual adaptability, is susceptible to an individual-centred reading. The framework seeks to address this tension by treating career adaptability as merely one of three parallel types of conversion factor and stipulating that social and environmental factors shape capabilities independently of personal adaptability. As a result, irrespective of a student's level of adaptability, the conceptual role of structural conditions remains visible, and constrained capabilities are not attributed solely to the individual. This preserves the capability approach's stance against individualisation while retaining Career Construction Theory's account of agency. The resolution is developed in Section 5.

5. A Capability-Based Framework for Assessing Career Transition Quality

On the foundations established in Section 4, this study proposes career transition capability as the criterion for gauging the quality of vocational college students' career transitions—students' substantive opportunities to formulate and pursue career paths they have reason to value. The object of assessment is therefore students' capabilities, not realised functionings alone (employment or further study); the insufficiency of the latter was demonstrated in Section 2. The proposed evaluative framework distinguishes

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two capability dimensions [7], the capability to aspire and the capability to realise aspirations. Personal, social and environmental conversion conditions provide context for interpreting indirect observations, while documented feasible and blocked options remain necessary to judge substantive freedom. Figure 1 presents the framework in summary.

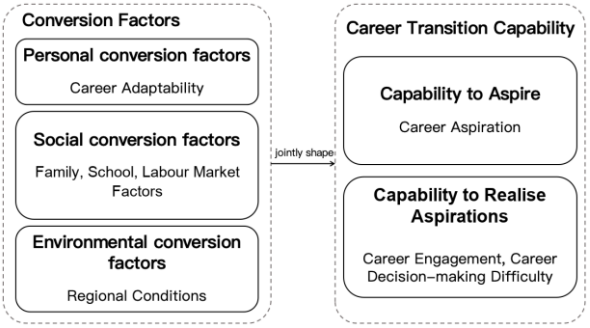


Figure 1. Conceptual map of proposed capability dimensions, indirect observations and conversion conditions. The arrows are theoretical propositions, not empirically estimated effects; observations alone do not identify feasible opportunity sets.

The framework exhibits two defining features. First, the three types of conversion factor denote distinct domains; social and environmental conditions may affect observations directly or partly through adaptability, so "parallel" does not imply statistical independence (Section 5.3). Second, the framework is developmental and non-deterministic, attending to the freedoms students have developed rather than to outcomes that must materialise; identical observed scores may coexist with different opportunity sets and eventual destinations. The remainder of Section 5 develops these elements in turn.

5.1 The capability to aspire

The capability to aspire refers to the developed ability to form a vision of a valued future and to navigate towards it [7,25]. Outcome-oriented assessment records only what graduates ultimately do; it captures neither which futures students regard as open to them and worth pursuing, nor the conditions under which aspirations are formed, and it readily treats low or narrow aspirations as indicative of insufficient motivation. As established in Section 4.2, Hart [7] treats aspiration as a capability rather than an accomplished wish or result, and notes that adaptive preference shapes the formation and transformation of aspirations. A low aspiration may therefore signal a constrained capability rather than the absence of valued goals [21].

The present paper selects career aspiration as the observed concept for this capability [33,34]. Career aspiration refers to students' articulation of a valued occupational future. It indicates a reported orientation towards a future but neither its genuine valuing nor the set of feasible alternatives can be established from a scale response alone. The revised Career Aspiration Scale distinguishes achievement, leadership and educational aspirations; the original and revised instruments should not be treated as interchangeable [33,34]. Because these instruments were developed largely with women in Western educational settings, their domains and wording require contextual validation before they are applied to Chinese vocational college students.

Aspiration reports require interpretation rather than a simple high–low score. Limited exposure and strong constraint may narrow stated ambitions, yet neither constraint nor a low reported aspiration proves adaptive preference; similarly, apparent opportunities do not certify that a low aspiration is freely chosen. Assessment should ask students which options they value, what alternatives they regard as genuinely attainable and what evidence corroborates or challenges that judgement. Interviews, opportunity records and repeated observations can examine competing interpretations without assigning a student's "true" preferences from a single score [7,21]. This cautious interpretation underlies Proposition 3 and the design principles in Section 6.

Research with Chinese higher vocational students documents variation in intended destinations and decision-making processes [11,13,14]. Work on adolescent aspirations and later attainment offers relevant background but cannot establish the validity of an aspiration-based capability measure for this population [35,36]. The suitability of instruments, interpretation of aspiration levels and relation to genuine opportunities therefore remain empirical questions.

5.2 The capability to realise aspirations

The capability to realise aspirations refers to the substantive freedom, given one's resources, opportunities, and social position, to translate valued aspirations into action and to pursue them [6,7]. Outcome-oriented assessment equates absorption by the labour market with the ability to pursue valued aspirations. Yet under credential-based and labour market discrimination, some graduates may face blocked opportunities, whereas others may reach a similar destination through different supports. These scenarios illustrate why outcomes may fail to capture the processes constituting this capability—namely active engagement and the unimpeded freedom to choose and commit. The capability therefore comprises two facets of observation, action and choice.

The action facet is provisionally represented by career engagement: behaviours such as planning, exploration and skills development [37]. However, low engagement may reflect blocked access, care responsibilities or a considered decision not to pursue a particular route, rather than limited capability. The choice facet is provisionally represented by career decision-making difficulty, including lack of readiness, information and consistency of information [38,39]. Lower difficulty cannot automatically be interpreted as greater freedom: constrained choice sets, premature foreclosure and adaptive preferences can also produce apparent certainty. These two observations should therefore be interpreted jointly with students' stated goals, verified options, barriers and longitudinal trajectories, rather than combined into a mechanically scored measure.

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The mapping is functional rather than numerically symmetrical. The capability to aspire concerns the formation of a valued direction, for which career aspiration supplies one coherent observed concept; the capability to realise aspirations encompasses two analytically distinct facets—enacted pursuit and freedom from decision obstacles—approached provisionally through career engagement and decision-making difficulty. Equal numbers of observed concepts are therefore neither theoretically required nor assumed to imply equal weighting, and career aspiration remains a parsimonious trace rather than an exhaustive representation of the proposed capability-to-aspire dimension.

Evidence from Chinese higher vocational students has examined career decision-making and its association with adaptability [11,13,30], but the studies cited do not establish a population-wide level of career engagement or a valid comparison of decision difficulty with university undergraduates. Perceived discrimination has been associated with career exploration among vocational students [12], and recruitment signalling has been documented in a different applicant comparison [10]. Accordingly, these sources motivate attention to context; they do not justify a generalised prevalence claim. Aspiration, engagement and decision difficulty are complementary candidate observations, and their distinctiveness must be established in the intended sample.

5.3 Conversion conditions: personal, social, and environmental factors

The two capabilities do not emerge from resources automatically. Within the capability approach, the degree to which resources are converted into capabilities is determined by conversion factors [21]. This departs slightly from the standard formulation. In the canonical account, conversion factors convert resources into functionings, and the capability set comprises the range of functionings a person can achieve [5,22]; the present framework, following Section 4.2, treats the two capabilities as developable capacities, so that what conversion factors shape is how these capabilities are formed. The framework incorporates three domains of conversion conditions. The personal conversion factor is career adaptability; the social conversion factors correspond to the family, the school, and the labour market; and the environmental conversion factors correspond to regional economic and industrial conditions. These domains may jointly and interactively shape feasible opportunities and the development of the two proposed dimensions; the assessable aspects of each are set out below.

According to Career Construction Theory, career adaptability is proposed as one personal conversion resource—a possible psychosocial channel through which students convert available resources into the two capabilities. It supports exploration and the maintenance of valued goals, bearing on the capability to aspire [40], and has been linked with proactive behaviour and decision-related processes, bearing on the capability to realise aspirations [29,30,41,42]. It should also be noted that adaptability is itself shaped by social conditions; associations between family conditions and adaptability have been reported [43,44,45]. Accordingly, although the three types of factor are treated in parallel, adaptability should not be interpreted as a purely personal endowment unrelated to social origin.

The social conversion factors correspond to the principal social settings in which vocational college students are situated—the family, the school, and the labour market—and assessment can accordingly examine three aspects. The first is family socioeconomic status. The association between family conditions and students' career development and adaptability is well established [43,44,45] and provides baseline information for interpreting the conditions under which capabilities are formed. The second is specific institutional opportunities, including access to guidance, internships, progression pathways and employment support, rather than an unspecified circular "school quality" score. These conditions may influence vocational graduates' transition opportunities and employment quality [46]. The third is labour market discrimination, separately documented recruitment practices and perceived discrimination. A field experiment on education-background signalling did not isolate vocational graduates [10], whereas a study of vocational students linked perceived discrimination with career exploration [12] and a junior-college study examined perceived educational discrimination and employment anxiety [47]. Subjective experiences of one's situation, such as perceived discrimination, may depress students' aspirations through the mechanism of adaptive preference; however, the downward adjustment of preferences and the constraint of capability are not identical concepts, the former being only one possible sign and mechanism of the latter [5,7,21]—and this is precisely the basis of the aspiration interpretation rule (Proposition 3). Concurrently, irrespective of a student's level of adaptability, these social conditions may shape capability-relevant observations independently; constrained capabilities should therefore not be attributed solely to the individual (Proposition 2) [5,9].

The environmental conversion factors correspond to the economic and industrial conditions of the region in which students are located. Research demonstrates that graduates' employment opportunities and employment quality vary systematically with region and industrial structure [48,49]; for vocational college students, the level of local industrial development additionally affects the availability of internships and field-matched positions. Assessment can therefore employ regional economic development and industrial development as environmental-level reference information for interpreting cross-regional differences in students' capability observations, without treating them as measurement items applied to individual students.

The Chinese context is not merely an empirical setting but a theoretically revealing configuration of conversion conditions. Formal progression from higher vocational education to undergraduate-level vocational programmes expands students' nominal option sets [50],

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whereas credential hierarchies may condition access to routes, although the particular vocational-group effect cannot be inferred from the recruitment experiment cited here [10]. Regional variation in economic and industrial development further changes the availability of internships and field-matched employment [48,49]. The framework therefore treats progression pathways, credential regimes, and place-based opportunity structures as interacting conversion conditions. Their configuration may alter the relationship between personal adaptability and capability observations and constitutes a boundary condition for transferring the framework to other education systems.

Finally, because career adaptability is a dynamic resource rather than a stable trait [31], both the capabilities and their conversion conditions evolve over the course of the transition. Assessment should therefore be conducted at multiple time points within the transition period rather than at a single juncture. This also addresses a recognised limitation of the capability approach, namely its absence of a temporal dimension, even though careers unfold in time [5].

5.4 Assessment propositions

Proposition 1. The capability to aspire and the capability to pursue valued aspirations are distinct proposed evaluative dimensions; aspiration, engagement and decision difficulty provide partial observations whose interpretation requires direct evidence of feasible and foreclosed options.

Proposition 2. Personal, social and environmental conversion conditions are distinct analytical domains; social and environmental conditions may be related to capability-relevant observations directly and through career adaptability, subject to longitudinal empirical testing.

Proposition 3. Under constrained opportunity structures, a low reported aspiration is compatible with both adaptive preference and genuinely valued choice; repeated observation, opportunity evidence and student accounts are needed to distinguish these competing interpretations.

Table 1 consolidates the relationships among the two capabilities, their observed concepts, the conversion factors, the assessment propositions, and the corresponding design implications.

Table 1. Summary of the capability-based assessment framework.

Component	Proposed observation and use
Aspiring	Career aspiration: reported direction and valued goals. Interpret with student accounts, accessible routes and barriers. Propositions 1–3.
Pursuit: action	Career engagement: planning, exploration and skills investment. Compare across waves and investigate barriers to action. Propositions 1–2.
Pursuit: choice	Career decision-making difficulty: information, readiness and conflict. Low difficulty alone does not establish freedom. Propositions 1–3.

Note. All three observations require personal adaptability and contextual information about family, institutional support, labour-market conditions and regional opportunities. None is a direct capability score.

6. Implications for Assessment Design

Capability-informed assessment requires three changes: broadening the evidence collected, interpreting observations in context and separating educational contributions from external constraints. The three principles below concern assessment rather than intervention; the framework is intended to evaluate transitions, not to prescribe a programme for changing them.

6.1 From outcome indicators to capability observations

Prevailing institutional assessment relies on outcome indicators—graduate employment rates, starting salaries, and study–job match—whose limitations were demonstrated in Section 2. Capability-based assessment does not discard these administratively valuable indicators but supplements them with capability observations—career aspiration for the capability to aspire, and career engagement together with contextually interpreted career decision-making difficulty for the capability to realise aspirations (Proposition 1). Because capability pertains to development rather than to a single endpoint, these observations should ideally be collected at multiple time points within the transition period, enabling assessment to capture developmental trajectories rather than merely terminal states.

In practice, established instruments, such as the Career Aspiration Scale, the Career Engagement Scale, and the Career Decision-making Difficulties Questionnaire may support quantitative observation after linguistic, cultural and population-specific validation, complemented by process-oriented tools such as reflective portfolios and structured self-assessment to document the development of capabilities. Any psychometric data from these scales constitute, however, only a partial informational basis. Consistently with the capability approach, they should be situated within the richer, contextualised information the approach demands, rather than substituting for it, because narrowly defined psychometric constructs cannot, by themselves, capture the breadth of an individual's situation [5]. Assessment reports should accordingly present the developmental quality afforded by the institution separately from the outcomes determined by the labour market, and should not adjudge a transition to have failed solely on the basis of non-employment—this is the central claim of the paper.

6.2 Incorporating conversion conditions into assessment

The measurement of capability observations alone is insufficient. In the absence of information on the conditions under which capabilities are formed and exercised, a constrained capability is liable to be misconstrued as an inadequate one. Capability-based assessment therefore reads capability observations in

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conjunction with conversion conditions. The personal conversion factor is career adaptability; the social conversion factors can be examined through family socioeconomic status, access to institutional guidance, internships and progression pathways, and labour market discrimination (including both objective differential treatment and perceived discrimination); and the environmental conversion factors can be referenced through regional economic and industrial development. The question assessment must answer is therefore not merely what the observations suggest, but under what conditions their capabilities were achieved.

In practice, assessors should collect conversion conditions alongside capability-related observations, examine whether constraints explain apparent differences and identify barriers relevant to support provision. These conditions are interpretive evidence, not deficits to be scored against individual students (Proposition 2). Structural disadvantage must not be converted into an individual failure score.

6.3 Interpretation rules and equity

Two interpretation rules follow from the framework. First, career aspirations must be interpreted in conjunction with the opportunity structure. Under strong constraint, a low aspiration may be compatible with constrained opportunities and adaptive preference, but the evidence may also support a freely chosen preference, and should therefore not be construed as insufficient motivation [7,21] (Proposition 3). Second, because social conversion conditions can constrain opportunities independently of adaptability, constrained capabilities should not be attributed solely to the individual. Capability-based assessment is therefore a complement to structural reform, not a substitute for it, as it redirects the function of assessment from holding individuals to account towards identifying constraints and allocating support, and it must not degenerate into a new instrument of individual accountability.

Together, the three principles translate the conceptual framework of Section 5 into operational assessment practice and give effect to the paper's central claim—the quality of vocational college students' career transitions is more comprehensively assessed by considering capability-relevant evidence alongside realised outcomes.

7. Conclusion

This paper has proposed a conceptual, capability-based framework to reconceptualise the assessment of career transition quality among vocational college students in China. The framework takes career transition capability—the substantive freedom to pursue valued career paths—as the additional evaluative focus for transition quality. This capability comprises two constituent capabilities, the capability to aspire and the capability to realise aspirations, inferred cautiously from aspirations, engagement, decision difficulty and direct evidence of attainable and blocked alternatives. The framework incorporates three types of conversion factor in parallel—career adaptability as the personal conversion factor; family, school, and labour market conditions as the social conversion factors; and environmental factors such as regional economic and industrial development. Among these, social factors (such as labour market discrimination) are not reducible to personal adaptability. On this basis, three assessment propositions and three assessment design principles have been derived.

The article contributes an evaluative distinction between destinations and opportunities, a theoretical integration that treats adaptability as one conversion resource, and an assessment strategy linking indirect observations with opportunity evidence. These contributions remain conceptual: neither the proposed dimensions nor their relationships have been validated in Chinese higher vocational samples.

Several limitations should be acknowledged. As a conceptual analysis, the framework provides no empirical evidence regarding the strength or variability of the relationships it describes; its propositions are theoretically derived and await empirical testing. Its provisional observation strategy adopts the Hart–Appadurai developmental reading rather than the strict Senian formulation; this choice motivates indirect observations but departs from treating capability as an option set, and readers adhering to the stricter formulation may interpret the observations differently. The framework was developed for, and applies most directly to, Chinese higher vocational education; its transferability to other systems therefore remains to be examined. Nor does the framework exhaust individual-level differences—such as emotional and psychological states, cultural norms, and differential access to support—all of which may affect how conversion conditions operate in practice. The literature was used for conceptual synthesis rather than identified through a reproducible systematic search; omission of relevant work remains possible. The cited recruitment experiment does not specifically estimate a vocational-versus-bachelor credential effect.

These limitations point to a proposition-specific empirical agenda. Proposition 1 may be examined through a multi-wave measurement study comparing a correlated three-construct model with alternatives that collapse conceptually adjacent constructs. Measurement invariance across gender, transition destination, and region should be established before group comparisons are undertaken. Capability-related observations should initially be reported as a theory-informed profile alongside independently collected feasible-option evidence, not assumed to constitute a validated composite or single reflective latent factor.

Proposition 2 may be tested using longitudinal multilevel structural equation modelling, with students nested within institutions and regions. Direct paths from family, school, labour-market, and regional conditions to each capability observation should be estimated after baseline observations and career adaptability are controlled, alongside indirect paths through adaptability. Such a model could estimate whether social and environmental conversion factors show residual associations after adjusting for adaptability; observational paths would not by themselves identify causal effects.

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Proposition 3 requires repeated measures of career aspiration and opportunity constraints. Latent-growth or interaction models can examine whether aspirations remain low or decline under sustained constraints, while trajectory-based interviews can explore accounts consistent with adaptive preference or a genuinely chosen low aspiration without presuming that interviews provide an infallible classification. Further work may also examine boundary conditions, including counsellor and institutional support and the cultural shaping of aspirations.

The resulting framework provides a provisional basis for assessing valued opportunities alongside outcomes, and for testing its conceptual and measurement assumptions in future research.

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References

[1] Sullivan SE, Al Ariss A. Making sense of different perspectives on career transitions: a review and agenda for future research. Human Resource Management Review. 2021;31(1):100727. doi:10.1016/j.hrmr.2019.100727.
[2] Schoon I, Bynner J. Young people and the Great Recession: variations in the school-to-work transition in Europe and the United States. Longitudinal and Life Course Studies. 2019;10(2):153–173. doi:10.1332/175795919X15514456677349.
[3] Liu Z. China's Higher Vocational Education and Training (HVET) graduates' soft-skill gap: individual aspirations and structural constraints. Research in Post-Compulsory Education. 2025;30(4):698–722. doi:10.1080/13596748.2025.2550847.
[4] Mussagulova A, Chng S, Goh ZAG, Tang CJ, Jayasekara DN. When is a career transition successful? A systematic literature review and outlook (1980–2022). Frontiers in Psychology. 2023;14:1141202. doi:10.3389/fpsyg.2023.1141202.
[5] Robertson PJ, Egdell V. A capability approach to career development: an introduction and implications for practice. Australian Journal of Career Development. 2018;27(3):119–126. doi:10.1177/1038416217704449.
[6] Su X, Wong V. Enhancing the career capabilities of NEET youth in Hong Kong: an experience-driven framework. International Journal for Educational and Vocational Guidance. 2022;22(3):713–738. doi:10.1007/s10775-022-09531-5.
[7] Hart CS. How do aspirations matter? Journal of Human Development and Capabilities. 2016;17(3):324–341. doi:10.1080/19452829.2016.1199540.
[8] Robertson PJ. Towards a capability approach to careers: applying Amartya Sen's thinking to career guidance and development. International Journal for Educational and Vocational Guidance. 2015;15(1):75–88. doi:10.1007/s10775-014-9280-4.
[9] Egdell V, Robertson PJ. A critique of the capability approach's potential for application to the practice of career guidance. International Journal for Educational and Vocational Guidance. 2021;21(2):447–463. doi:10.1007/s10775-020-09445-0.
[10] Li B, Bai Y. Market Signaling of Educational Background: Evidence from a Field Experiment. Economic Research Journal. 2020;55(10):176–192. Chinese.
[11] Wang Z, Fan C, Niu J. Predicting effects of career adaptability and educational identity on the career decision-making of Chinese higher vocational students. International Journal for Educational and Vocational Guidance. 2025;25(1):111–130. doi:10.1007/s10775-023-09591-1.
[12] Liu X, Sun X, Hao Q. Influence of discrimination perception on career exploration of higher vocational students: chain mediating effect test. Frontiers in Psychology. 2022;13:968032. doi:10.3389/fpsyg.2022.968032.
[13] Wang XH, Wang HP, WenYa L. Improving the quality of career decision-making of students in Chinese higher vocational colleges. SAGE Open. 2023;13(2):1–14. doi:10.1177/21582440231180105.
[14] Wang G, Doyle L. Constructing false consciousness: vocational college students' aspirations and agency in China. Journal of Vocational Education & Training. 2022;74(4):664–681. doi:10.1080/13636820.2020.1829008.
[15] Harvey L. Defining and measuring employability. Quality in Higher Education. 2001;7(2):97–109. doi:10.1080/13538320120059990.
[16] Tomlinson M. Graduate employability: a review of conceptual and empirical themes. Higher Education Policy. 2012;25(4):407–431. doi:10.1057/hep.2011.26.
[17] Li HQ, Tao JD, Shi JH. Vocational college graduates' employment quality evaluation index system: existing problems and optimisation path [in Chinese]. China University Students Career Guide. 2023;(2):10–22.
[18] Jaakkola E. Designing conceptual articles: four approaches. AMS Review. 2020;10(1–2):18–26. doi:10.1007/s13162-020-00161-0.
[19] Gilson LL, Goldberg CB. Editors' comment: so, what is a conceptual paper? Group & Organization Management. 2015;40(2):127–130. doi:10.1177/1059601115576425.
[20] MacInnis DJ. A framework for conceptual contributions in marketing. Journal of Marketing. 2011;75(4):136–154. doi:10.1509/jmkg.75.4.136.
[21] Sen A. Development as freedom. Oxford: Oxford University Press; 1999.
[22] Robeyns I. The capability approach: a theoretical survey. Journal of Human Development. 2005;6(1):93–117. doi:10.1080/146498805200034266.
[23] Chiappero-Martinetti E, Egdell V, Hollywood E, McQuaid R. Operationalisation of the capability approach. In: Otto HU, Atzmüller R, Berthet T, Bifulco L, Bonvin JM, Chiappero-Martinetti E, et al., editors. Facing trajectories from school to work. Cham: Springer; 2015. p. 115–139. doi:10.1007/978-3-319-11436-1_7.
[24] Hart CS. Aspirations, education and social justice: applying Sen and Bourdieu. London: Bloomsbury Academic; 2012.
[25] Appadurai A. The capacity to aspire: culture and the terms of recognition. In: Rao V, Walton M, editors. Culture and public action. Stanford (CA): Stanford University Press; 2004. p. 59–84.

RETRACTED

[26] Nussbaum MC. Creating capabilities: the human development approach. Cambridge (MA): Harvard University Press; 2011.
[27] Egdell V, McQuaid R. Supporting disadvantaged young people into work: insights from the capability approach. Social Policy and Administration. 2016;50(1):1–18. doi:10.1111/spol.12108.
[28] Guan Y, Wang F, Liu H, Ji Y, Jia X, Fang Z, et al. Career-specific parental behaviors, career exploration and career adaptability: a three-wave investigation among Chinese undergraduates. Journal of Vocational Behavior. 2015;86:95–103. doi:10.1016/j.jvb.2014.10.007.
[29] Jia Y, Hou ZJ, Zhang H, Xiao Y. Future time perspective, career adaptability, anxiety, and career decision-making difficulty: exploring mediations and moderations. Journal of Career Development. 2022;49(2):282–296. doi:10.1177/0894845320941922.
[30] Wang HD, Chen L, Xu SM, Gu XY. Study on the types of career decision-making difficulties of Chinese higher vocational college students and the influence of parental career intervention behaviors [in Chinese]. Journal of Higher Education Management. 2025;19(2):86–100. doi:10.13316/j.cnki.jhem.20250122.008.
[31] Savickas ML, Porfeli EJ. Career Adapt-Abilities Scale: construction, reliability, and measurement equivalence across 13 countries. Journal of Vocational Behavior. 2012;80(3):661–673. doi:10.1016/j.jvb.2012.01.011.
[32] Gerçek M, Özveren CG. Linking career exploration and decision self-efficacy to career engagement: a sequential mediation model of career adaptability and career calling. International Journal for Educational and Vocational Guidance. 2026 Apr 2 [published online]. doi:10.1007/s10775-026-09799-x.
[33] Gray MP, O'Brien KM. Advancing the assessment of women's career choices: the Career Aspiration Scale. Journal of Career Assessment. 2007;15(3):317–337. doi:10.1177/1069072707301211.
[34] Gregor MA, O'Brien KM. Understanding career aspirations among young women: improving instrumentation. Journal of Career Assessment. 2016;24(3):559–572. doi:10.1177/1069072715599537.
[35] Ashby JS, Schoon I. Career success: the role of teenage career aspirations, ambition value and gender in predicting adult social status and earnings. Journal of Vocational Behavior. 2010;77(3):350–360. doi:10.1016/j.jvb.2010.06.006.
[36] El Baroudi S, Fleisher C, Khapova SN, Jansen P, Richardson J. Ambition at work and career satisfaction: the mediating role of taking charge behavior and the moderating role of pay. Career Development International. 2017;22(1):87–102. doi:10.1108/CDI-07-2016-0124.
[37] Hirschi A, Freund PA, Herrmann A. The Career Engagement Scale: development and validation of a measure of proactive career behaviors. Journal of Career Assessment. 2014;22(4):575–594. doi:10.1177/1069072713514813.
[38] Gati I, Krausz M, Osipow SH. A taxonomy of difficulties in career decision making. Journal of Counseling Psychology. 1996;43(4):510–526. doi:10.1037/0022-0167.43.4.510.
[39] Kulcsár V, Dobrean A, Gati I. Challenges and difficulties in career decision making: their causes, and their effects on the process and the decision. Journal of Vocational Behavior. 2020;116:103346. doi:10.1016/j.jvb.2019.103346.
[40] Hirschi A. Swiss adolescents' career aspirations: influence of context, age, and career adaptability. Journal of Career Development. 2010;36(3):228–245. doi:10.1177/0894845309345844.
[41] Nilforooshan P, Salimi S. Career adaptability as a mediator between personality and career engagement. Journal of Vocational Behavior. 2016;94:1–10. doi:10.1016/j.jvb.2016.02.010.
[42] Leung SA, Mo J, Yuen M, Cheung R. Testing the career adaptability model with senior high school students in Hong Kong. Journal of Vocational Behavior. 2022;139:103808. doi:10.1016/j.jvb.2022.103808.
[43] Autin KL, Douglass RP, Duffy RD, England JW, Allan BA. Subjective social status, work volition, and career adaptability: a longitudinal study. Journal of Vocational Behavior. 2017;99:1–10. doi:10.1016/j.jvb.2016.11.007.
[44] Dong JQ, Gao T. Research on the relevance between career adaptability and family backgrounds of college and university students [in Chinese]. Beijing Youth Research. 2017;26(4):28–38.
[45] Wang Z, Dong W. Relationship between family variables and career adaptability: a meta-analysis. Behavioral Sciences. 2024;14(9):840. doi:10.3390/bs14090840.
[46] Guo JR. Reform of educational mode of higher vocational education and employment of graduates: an empirical study [in Chinese]. Journal of Central China Normal University (Humanities and Social Sciences). 2014;53(4):155–161.
[47] Song K, He D, Tu QJ, Niu GF, Zhou ZK. An empirical study on the impact and underlying mechanism of perceived educational discrimination on employment anxiety among junior college students [in Chinese]. Chinese Vocational and Technical Education. 2024;(13):65–73,83.
[48] Yue CJ, Xia J, Qiu WQ. An Empirical Study on Graduates' Employment: Based on 2019 National Survey. Journal of East China Normal University (Educational Sciences). 2020;38(4):1–17. doi:10.16382/j.cnki.1000-5560.2020.04.001. Chinese.
[49] Deng F, Sun BC. Trends in factors influencing graduate employment after higher education expansion: 2003–2011 [in Chinese]. Journal of Beijing Normal University (Social Sciences). 2014;(2):132–138.
[50] General Office of the Ministry of Education of the People's Republic of China. Notice on issuing the Administrative Measures for the Establishment of Undergraduate-Level Vocational Education Programmes (Trial) [in Chinese]. 2021 [cited 2026 Sep 16]. Available from: https://www.moe.gov.cn/srcsite/A07/zcs_zhgg/202101/t20210129_511682.html.

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