# Research on the Construction of a Digital Marketing Practical Teaching Platform for Business Administration Majors from the Perspective of Industry-Education Integration

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***Abstract:*** *The form and tool of Digital Marketing business is evolving constantly. To meet the needs of students who major in Business Administration with composite abilities (business judgment, user understanding, data analysis, content planning, channel coordination) .Connecting conditions between industry side and teaching side via industry-education integration provides opportunity for constructing platform that only aggregates resources and lists functions will hardly promote progressive capability development and evaluation feedback. We construct a digital marketing teaching platform for Business Administration majors based on industry-education integration by establishing an analytical framework consisting of three levels – theoretical positioning, architecture design, and operational assurance and quality iteration; proposing the structure of digital marketing capabilities, the functional coupling of industry-education integration, and the logic of knowledge integration and capability generation, designing a platform architecture connecting the foundational layer, resource layer, business layer, and evaluation layer, discussing resource aggregation and collaboration, learning path generation, and task flow design, analyzing multi-stakeholder collaboration, faculty development, content updating, learning outcome evaluation, and platform optimization mechanism. Cyclic relationship exists among knowledge, tasks, capabilities, and evaluation when we build platforms, from aggregating resources to generating capabilities, from course-centeredness to task-centeredness, from outcome evaluation to evidence evaluation.*

***Keywords:*** *industry-education integration; Business Administration; digital marketing; teaching platform; capability generation; quality iteration*

## Introduction

Tools used by digital marketing are changing rapidly; rules on platforms change often. Students who major in Business Administration needs to connect market analysis, user insight, data interpretation, content planning, and channel coordination. Single-tools training or one-way imparting course knowledge can hardly help students gain such composite ability. Industry-education integration brings industry-side business tasks, data materials, tool environment, and industry standard could be introduced into the teaching side, however, there would be difference in objective, pace, and language between industry tasks and teaching tasks. Platform plays the role as translator and reorganizer. Existing platform construction emphasizes stockpiling resources and displaying functions, no stable connection exists among learning paths, task flow, capability evidence, and feedback adjustment. Plenty of resources exist here, they might not become capabilities. Clarifying our research about theoretical position of digital marketing teaching platform integrates capability map, task chain, learning evidence, and evaluation feedback under the same structure gives an operable architectural solution for digital marketing teaching in Business Administration. Necessity of researching this issue is: A platform cannot only be a reservoir of resources, it has mechanisms of hierarchical articulation, resource scheduling, path adjustment, and quality iteration surrounding capability generation, so that industry-side resources and teaching-side objectives can make reusable connections and lay down foundations for further platform optimization.

## 1. Theoretical Positioning of the Digital Marketing Teaching Platform from the Perspective of Industry-Education Integration

### *1.1 Analysis of the Digital Marketing Capability Structure for Business Administration Majors*

The Digital Marketing Capability for Business Administration Majors does not mean being proficient at only one tool, rather having many capabilities (business judgment, user understanding, data analysis, content planning, channel coordination, and technology application) which have an understanding of market structure, consumer behavior, and competitive relationship with application of data metrics, content forms, placement logic, and platform rules. Strengths of Business Administration are their understanding of business systems connecting knowledge from marketing, organization, operations, and finance beyond just operating on a specific tool; therefore they have a unique composite characteristics including business analytical framework and foundation of judgment in digital business scenario[1].

Capability Structure From basic cognition to methodological application and tool operation, contextual decision making and reflective transfer. Being capable using a certain platform doesn't mean you can make digital marketing judgment, writing a piece of copy does not mean that one understands the underlying user logic. There are supportive relations between capability items like data literacy supports user insight, user insight supports content strategy which itself depends on channel coordination and performance feedback. We need open interfaces for the capability map which adapt with change in tool form and platform rule but it cannot be fixed after construction.

### *1.2 Functional Coupling between Industry-Education Integration and the Teaching Platform*

Heart is building up stable and reusable linkage on the side of industry to that of teaching. Platform is functional coupling for linking the side of industry's business tasks, data materials, tools environment and industry standards; and that of teaching's knowledge framework, learning objectives and evaluation rules. Coupling means there won't be any direct transfer of enterprise task into class. Business tasks have business objective, time pressure, resource constraint; Teaching tasks have cognitive progression, learning pace, capability requirement. Different in language. Need to find out operable connection rules between them[2].

Complete translation of business problems into learning problems, business data into teaching materials, business standards into capability evidence. Objectively: business needs and training direction should be consistent; Resource-wise: course content and industry materials need to have a mapping; Process-wise: learning activities and business tasks are always aligned; Evaluation-wise: learning outcomes and capability requirements have an evidence relationship. A platform plays as a boundary object for all kinds of actors to cooperate together without losing their own logics. Or another perspective can see that a platform does not just bring enterprise projects in, there's a translation/reorganization in between. In this case, enterprises will feel no help from students, teachers will feel disrupted by project, students will find it lively, but they may not necessarily develop capabilities.

### *1.3 The Logic of Knowledge Integration and Capability Generation in Platform Construction*

Logic of platform construction: knowledge integration. Tendency of knowledge in business administration courses is towards concepts, frameworks and models while knowledge in digital marketing industry tends towards tools, rules, data and context. There exists differences on both sides with respect to forms and modes of expressions. Platform should integrate explicit knowledge, tacit knowledge, procedural knowledge and contextual knowledge by integrating course knowledge points, industry tasks, tool operations and feedback data together as one structure. Integration means creating semantic association, tagging system, difficulty level, task mapping for invoking knowledge from different sources in specific tasks. The clearer the associations between knowledge items are, the better grounding resource invocation will be.

The origin is that the capability generated from knowledge nodes to task chains; then to capability clusters and evidence chains. Students activate knowledge with tasks, update their understanding through feedback, judge by collaboration, solidify capabilities via transfer. It relies upon the capability map as skeleton, task flow as thread and learning evidence for feedback, linking up knowledge input, task execution, process records and outcome reflection. In other words, it means that students don't

need to master everything before practice, apply what they know to tasks and go back to fill in gaps if there are problems while using them. Innovation of platform construction also lies here: changing from resource supply to capability generation, course-centeredness to task-centeredness, outcome evaluation to evidence evaluation, forming a cyclic relationship between knowledge, tasks, capabilities, and evaluation, continuously adjusting resource tags, task difficulty and path rules according to operational data. And this cycle turns the platform from a static resource space into a dynamic capability generation system[3].

## 2. Architecture Design of the Digital Marketing Teaching Platform for Business Administration Majors

### *2.1 Platform Tier Division and Module Articulation*

Platform tier division emphasizes in generation of capabilities: Foundational layer provides data storage, user management, tool interface and operating environment, it is solid technical basis for all layers above; Resource layer integrates course knowledge, industry materials, tool components, task templates into a resource pool which can be searched, associated and invoked; Business layer performs learning activities, task execution, collaboration communication and process records, here students interact with resources, tasks, peers and teachers; Evaluation layer collects learning behaviors, work output, collaborative contribution and evidence of capability attainment, this is a base for path adjustment and optimization of resources. Layers don't have fixed vertical stack relationship, they dynamically connected by data interfaces or task flows. The significance of tier division lies in letting each function play its role properly and maintaining invocation channels between them.

Essence of module articulation is about clarifying input output relationship – the foundation layer provides data specification and interface standard to the resource layer; the resource layer provides materials and tools needed for tasks to the business layer; the business layer feed process data and outcome evidence to the evaluation layer; the evaluation layer sends adjustment signal to the resource layer and the business layer. Articulation makes the platform go beyond functions into functioning system. In other words, tier division does not divide the platform but let each module play their roles with a traceable, feedback capable, and adjustable connection between them. Without articulation rules among modules, no amount of resources will easily make effective learning paths, and no matter how authentic tasks are, they can easily be isolated activities. Clearer articulation rules leads to more stable platform operations that makes it easy for the capability generation process to leave identifiable evidence[4].

### *2.2 Aggregation and Collaborative Operation of Teaching Resources*

Aggregation of teaching resources solve problems from various resource sources with inconsistent format and frequent update. Such as course resources, industry materials, tool components, task templates and mentor resources has to be aggregated on the platform by uniform tagging system, metadata description and permission rule. It's not only transportation, but also establish mapping relationship among resources and capability items, task types and difficulty level. Resource middle platform can be use as an organizing way which categorize resources according to knowledge theme, tool type, business scenario and capability objective in order for different teaching tasks quick-match corresponding resources. The clearer the resource descriptions are, the higher the invocation efficiency will become and the less duplicated construction there is. Consideration about granularity when aggregating resources: Too coarse then it's hard to match precisely; too fine, the management cost increase. Find a balance between teaching needs and usage efficiency.

Collaborative operation focuses on keeping resources' vibrancy through dynamic usage. Resources are always being invoked, changed or supplemented during task execution, collaboration and evaluation; teachers may modify difficulty levels and combinations of tasks, industry mentors update business materials and tool versions, students generate new cases, works and reflection records in tasks. We should have some rules about reviewing resources, managing versions and incentives for contributing on the platform so that there will be a basis to follow for updating resources. The resource pool is different from a warehouse, which is like a continuously running scheduling system where we need rules to support who needs what, when it is needed and how it is used. Also, collaborative operation involves resource permission and sharing boundaries: we have to make sure open invocation and protecting the resource rights and interests of all parties at the same time. Only by guaranteeing the

continuous flow of resources getting revised in use do they keep up with the rapid changes of digital marketing business.

### *2.3 Learning Path Generation and Task Flow Design*

Both capability map and learning situation data are needed for learning path generation. Capability map is our target while learning situation data include students' current knowledge foundation, tool proficiency, collaboration preference and task completion. We determine where the student's capability level lies by diagnostic evaluation and process records so that we can generate a progression path from foundational cognition to tool operation, then contextual decision making and comprehensive application. It is not a strict track with branches and adjustments possible. Students can adjust their pace based on task feedback; teachers can adjust resource allocation and task difficulty according to overall data. The more sufficient the basis of path generation will make the learning process more targeted which makes it easier to observe and record progressive capability development[5].

Task flows convert the business logic of digital marketing to learning activities. Usually, a complete task flow has links such as: contextual introduction, problem definition, data acquisition, strategy formulation, content production, channel execution, performance feedback, reflective transfer. Platform decomposes them to executable, recordable and evaluable learning steps which form relations with resource layer and evaluation layer respectively. Task flow is not only copy-over business processes, it's translation of pedagogy to learning process. In another word, task flows should let students learn by doing, but they cannot be mechanical operations, there must have space for judgment and reflection nodes. Based on the data of task completion, work quality and collaborative performance, the platform dynamically combines next tasks so that learning paths and task flows can mutually support each other, a continuous process of generating capability. The higher the degree of matching between paths and tasks is, the more obvious the supporting role of the platform will be in cultivating digital marketing capabilities for Business Administration majors.

## 3. Operational Assurance and Quality Iteration of the Digital Marketing Teaching Platform

### *3.1 Multi-Stakeholder Collaboration and Organizational Support*

Participants are school teaching unit, teacher team, industry mentor, platform operator, student whose goals/resources/action logics vary inconsistently – teaching units cultivating capabilities and teaching order, industry mentors focusing on business logic and material updates, platform operators focusing on technical stability and data standards, students focusing on learning experience and task feedback. Bringing them all together is not completion of collaboration but clarification of role, task interface, and communication rule so that each part of resource input, process management, and result feedback has an owner. The organizational support provides a stable environment for collaboration (ad hoc cooperation to routine operation), between cross-departmental teaching and research organization, platform management team, etc.[6].

Ambiguity on responsibility and broken feedback easily happen in collaboration. Time rhythm between teaching tasks and business tasks differ, mode of expression from teachers and enterprise mentors differs too: so we need the platform to play a role of translation and coordination. With lists of rights and responsibilities, task dashboards and feedback channels, everyone know who give what, when to intervene and how to adjust. Different complementarity is made through collaboration, rather than eradicating differences. Platform operators maintain technical maintenance and ensure data security; teachers take charge of instructional design and process guidance; industry mentors take charge of business context and standard input; students participate in optimization by giving task feedback. Only with such an organization support, the platform will be stable rather than driven forward by specific people.

### *3.2 Faculty Development and Content Update Mechanisms*

Faculty development should focus on digital marketing teaching capabilities: teachers must be familiar with the business logic of digital marketing, master the operations of basic tools, have data interpretation and task design capabilities and organize learning activities under a platform environment. Industry mentor's involvement is beyond lectures/comments including links such as task design, process guidance, and outcome feedback. Cross-stakeholder teaching and research helps

teachers and industry mentors to build up their common language by converting business problems to learning problems. Improving faculty capabilities does not happen in just one training session, it accumulates over time with platform operation, collaboratively teaching, task debriefing and jointly developing resources creates an accumulation of capabilities inside the teaching team.

The mechanism of content update should consider features of digital marketing field such as fast iteration of tools, frequently changing rules by platforms and high timeliness of materials. All course knowledge, industry materials, tool components, task templates need version management (update trigger condition, review, division), Content updating can't only be done by individual or pushed by platform operator; create a feedback-driven update chain according to learning behavior, task completion, industry mentor opinion, tool versions change. That is, content updating doesn't mean replace old resources for new one. Resources will follow up with capability objectives, task difficulty, industry changes. Timely resource updates make platform teaching match the business environment well, which makes it easy to keep the authenticity of learning tasks.

### *3.3 Learning Outcome Evaluation and Platform Optimization*

The assessment of learning outcome includes process performance, work quality, capability attainment, and collaboration contribution. Digital marketing capabilities is comprehensive and contextual, which cannot be reflected in one test or work completely. We collect task logs, operation traces, work versions, peer review records, and reflection texts via the platform to establish a learning evidence chain. Through diagnostic evaluation to find starting points, formative evaluation to adjust the process, and summative evaluation to determine capability attainment. The evaluation results should not only give students scores, but also feed back to task design, resource tags, and path rules so that there would be an association between evaluation and teaching. The clearer the evaluation dimensions are, the more targeted the feedback becomes, and it will be easy for students to know what to make up for next.

Platform should optimize based on evaluation feedback and operation data. Learning analytics might indicate resource invocation bottleneck, mismatched task difficulty, effect of path branches or quality of collaborative interaction which provide resources adjustment, task reorganization as well as interface optimization. The optimization is not a fix but cyclically evaluate, feed-back, adjust and re-operate. Quality of the platform depends upon its initial design but constantly calibrate while using it. Evaluation result will be fed back in resource layer and business layer leading to update contents, adjust task difficulty and revise path rules so that the platform can adapt dynamically. Iterative mechanism enable the digital marketing teaching platform running continuously within the industry-education integration environment and make the process of capability generation traceable.

## Conclusion

The construction of digital marketing teaching platform for Business Administration majors based on industry-education integration needs takes capability structure, functional coupling, knowledge integration and capability generation as its theory base; tier division, resource aggregation, learning path generation and task flow design as its architectural core; multi-stakeholder collaboration, faculty development, content updating, learning outcome evaluation and platform optimization as its operational assurance. The quality can not be decided after being designed, but calibrated through use, feedbacks and adjustments. Deepen the dynamic update rules of capability map, improve the way of matching resource tags with task difficulty, refine the application of learning analytics in path adjustment, discuss the boundary of rights and responsibilities and arrangement of resource rights and interests in cross-stakeholder collaboration, continuously improve the platform structure around the evaluation evidence chain and iterative mechanism are the directions for our future research work. Pay attention to the granularity of resources, the precision of task translation, and the timeliness of feedback, avoiding resource stacking when learning paths idle so that the digital marketing teaching platform has adaptability, continuity, and transferability under the background of industry-education integration, shifting from providing functional support to capability generation support.

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