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Executive Education in the Digital Matrix: The Disruption of the Supply Landscape

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Abstract

Even as the demand for managerial skills continues to grow, executive education worldwide has entered a period of disruption caused by the digitalization of content, connectivity, and communication. The current offerings of many executive education program-providers fall short of creating new skills in executives and developing fresh capabilities for organizations. Based on a study of all the programs offered by the business schools, consultancies, corporate universities, and online education-providers, we analyze the advantages, and the constraints, of the existing programs. We also map the vehicles for skill development – such as case discussions, lectures, simulations, coaching sessions, live projects, et al -- in terms of their potential to develop executives for the future. We then examine the impact of the forces of digital disruption – the disaggregation and disintermediation of activity chains, and the decoupling of the sources of value in education programs – on the future of executive education.

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I. The Emerging Landscape of Executive Education

In our first two working papers on executive education, we contrasted the objectives of the managers attending executive education programs with those of the organizations that sponsor them, and described the fast-changing landscape of the executive education industry [Moldoveanu and Narayandas, 2016, 1; Moldoveanu and Narayandas, 2016, 2]. In this, the third working paper in the series, we analyze the major providers of executive education programs, so we can better understand the industry's present and future dynamics.

Analyzing the education providers by focusing on the main differences between them allows us to map the substitutes for, and the complements of, the sources of value in executive education programs. It also helps us understand the impact that the troika of disruptive forces – disaggregation, disintermediation, and decoupling – is having on the education providers' cost structures, and enables us to figure out the latter's possible futures.

To facilitate the comparison, we distilled all the executive education offerings available at present into a set of learning vehicles. These learning vehicles range from classroom-based lectures, case study discussions, and simulations, to on-site and off-site skill- and personal coaching, to online learning vehicles that try to transfer the right skill to the right person at the right time. We evaluated each learning vehicle with an eye towards its likely evolution in terms of ensuring both skill development and skill transfer, the two major challenges that executive education faces today.

II. Mapping the Landscape of Executive Education Providers

Executive education comes in many forms and guises. It is delivered by an increasing number of organizations ranging from external providers — such as online certifiers and aggregators, consultancies, business schools, and universities — to internal suppliers such as organizations' human resource (HR) and talent-management functions and corporate universities. Most providers offer several kinds of products, such as executive MBA programs, custom programs, and so on. Each of them has a different cost

structure and value proposition, so they enjoy different positions, and compete differently, in the executive education market.

Executive education as we know it began after World War II, when the leading U.S. business schools -- such as Harvard Business School in 1945, Columbia Business School in-1951, and Northwestern's Kellogg School of Management in 1951 -- started offering non-degree business education programs. Those were usually residential programs, with managers living and working with their peers on a university campus for a short period, often during the spring or the summer. The prototype appears to have been Harvard Business School's World War II-era 15-week production course that retrained older managers, so they could switch from their civilian posts to war-time roles.

From the 1950s to the 1980s, executive education consisted mostly of university-based programs. Participants learned the latest theories of management and the techniques with which to apply them, largely by studying cases and listening to lectures by academics. The faculty tended to decide what courses would be offered based on their research interests. "For the attending executive, the experience itself was seen as both a reward and as preparation for their promotion to senior levels," points out a paper by Jay Conger and Katherine Xin [Conger and Xin, 2000]. Companies relied on university-delivered programs to develop executives in functional areas, such as marketing or finance, as well as in broader policy-related issues, such as environmental regulation [Crotty and Soule, 1997].

A shift began to take place in the early 1990s, when companies started using executive education programs to bring about organizational changes, not just to cater to for managers' developmental needs. As a result, the popularity of custom programs soared. More than half the members of the University Consortium for Executive Education (UNICON) reported that over 50% of their revenues between 2005 and 2010 came from custom programs [Lloyd and Newkirk, 2011]. This shift took place partly because of the gap that had emerged between academic teachings on business and the skills that organizations needed. It also enabled many new kinds of organizations, such as consultancies and learning development organizations, to enter the field, as the exhibit below shows (Please see Figure 3.1]).

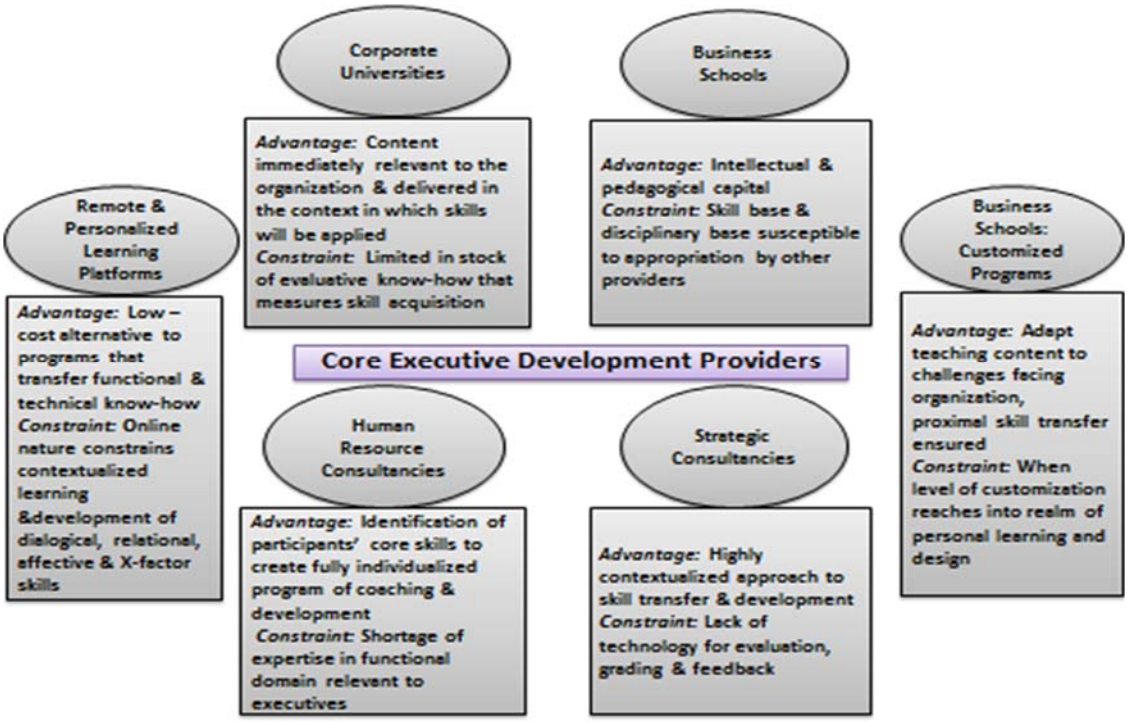

Figure 3.1. A map of executive education program providers, specifying their core differentiators and constraints.

We will begin our analysis by focusing on each kind of education-provider, describing the key differentiating features of its offerings as well as the challenges, we believe, it will face in an increasingly digital world.

Business Schools' Executive MBA and Open Enrollment Programs

By business schools, we mean the faculties of business administration or management at established universities. At one level, the business schools serve as selection and certification engines; they provide signals, through their selection criteria and transcripts, to the employment market regarding the skills executives are assumed to have acquired from the courses they have taken. At another level, the business schools are social capital amplifiers, offering participants the opportunity to form relationships in their own industry as well as across sectors.

The business schools' Executive MBA (EMBA) and open enrollment programs use both on-campus and mixed-mode (classroom and on-the-job projects) teaching, focusing on developing the participants' intellectual, personal, and social capital. These concentrated programs of cohort-based study vary in length: Some run for up to eight weeks, broken up into multiple modules over two or three years, while programs that focus on developing a specific topic or skill usually extend from two to five days.

By contrast, custom executive programs are in-person programs commissioned by a single company, and conducted on a campus, at the company, or at a neutral location. They are developed and taught in three ways: By business school faculty through the school's executive education function; privately, by business school or other faculty; or by independent consultants and non-faculty instructors. They extend, typically, from one to two weeks. (We will analyze the business schools' custom programs separately, below).

Core Differentiators & Value Drivers. The business schools differentiate themselves from other executive education-providers by their intellectual and pedagogical capital. Since the late 1970s, their faculty have consisted of, and been led by, trained academics with doctoral degrees in the social sciences, such as economics, psychology, and sociology as well as the related sub-disciplines. These academics have established different degrees of legitimate expertise -- or cognitive jurisdiction [Moldoveanu, 2009] -- over the functional disciplines of business, such as strategy, marketing, finance, human resources, and organization behavior (Please see Figure 3.2.).

Unlike business school curricula before 1970, when classroom discussions of managerial problems were led by current or former executives, the curricula of EMBA and open-enrollment programs today are taught largely along disciplinary lines. As a result, different academic disciplines have established their intellectual jurisdiction over the teaching of functional topics: Psychology and sociology over leadership, operations research and microeconomics over operations management, economics and sociology over strategy, and so on.

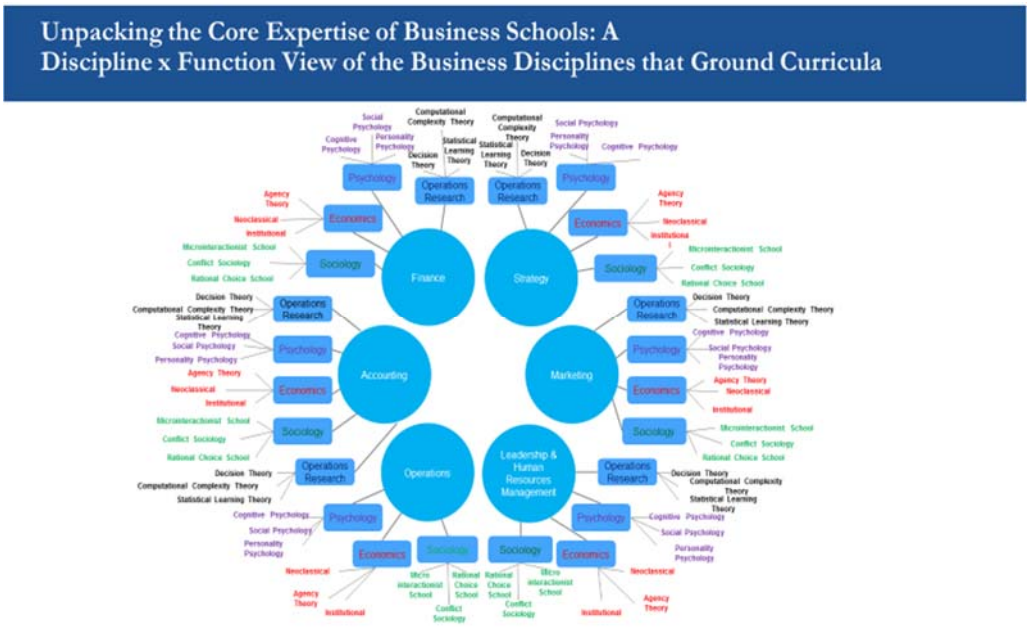

Figure 3.2: The division of labor in business schools: Mapping the teaching of functional skills onto the academic backgrounds of the faculty members.

Because of their standardized curriculums, the business schools find it difficult to differentiate themselves from one another. However, they differentiate themselves from all the other education-providers by their pedagogical tools and tropes. Academics at the business schools have learnt to turn the empirical data and theoretical frameworks associated with academic disciplines into frameworks and methods that help solve business problems. These pedagogues can create the teaching notes and course designs that are essential to turn their implicit expertise into teachable skills. Consequently, the business schools have developed standardized core curriculum [Datar and Garvin, 2010; Moldoveanu and Martin, 2008], and their faculty members teach executives based on a set of discipline-based, canonical methods.

The business schools have also differentiated themselves by the selection and evaluation practices they deploy to measure candidate quality and skill acquisition. Those practices comprise batteries of pre-course tests (admission tests) and post-course tests (exams and quizzes), usually associated with teaching in standard formats. The business schools have developed expertise in evaluating the acquisition and transfer of cognitive

and technical skills by formulating questions that produce the "right" spread among respondents' scores. The spreads enable employers to differentiate among graduates by their performance, as reflected by their grades, and help legitimize the signaling value of the certificates and diplomas that the business schools award.

Challenges & Constraints. However, the business schools' delivery of the optimal educational experience is currently being challenged by several factors.

One, the business schools' pedagogical and teaching tools are optimized for the development of the cognitive, technical, and algorithmic skills associated with functional disciplines. Moreover, they focus on teaching the canonical models and methods that constitute a standard managerial toolkit, which is usually suited to address only well-defined and well-structured business problems [Moldoveanu and Leclerc, 2015].

Even the business schools' learning configurations -- such as the instructor-to-learner ratio and the interaction formats -- are weighted towards large classes that optimize the time of faculty, graders, and teaching assistants. All these factors limit the opportunities for the development of the behavioral skills – including communicative, relational, affective, and X-skills – that are increasingly in demand in organizations. Those skills usually require intensive, iterative, personalized, and specific feedback.

Two, the business schools' learning production functions – the specific combinations of learners, content, context, and instructors that produce learning experiences – aren't easily adaptable to the demands for new skills or new ways of learning. Barring a few exceptions, they must fit in with the academic machinery of the business schools' parent universities.

Three, the business schools' learning production functions depend on a workforce, consisting of academics, that has high fixed costs. The structure can be modified only in the long run because of academics' tenure-based employment and compensation systems. Consequently, the business schools' responses to the disintermediation, disaggregation, and de-coupling unleashed by the digital economy seem to be greatly constrained at present.

Four, EMBA and open enrollment programs, are, at their current price points, susceptible to demand erosion because they are not aimed at building organization-specific collaborative, communicative, and cooperative capital, or company-specific skill bases. Sooner or later, wise organizations will choose to shift their executive development efforts to targeted programs, corporate universities, and the capability-building interventions offered by the management consultancies.

Five, employment agreements of business school faculty are less restrictive than those of the faculty at other executive education-providers. Tenured academics are quasi free agents, with their contracts allowing them to teach, consult, and lecture in their own time. That has created a flourishing secondary market for their services, allowing consultancies and corporate universities to appropriate the business schools' pedagogical skills and disciplinary base by hiring their faculty. The trend renders the business schools vulnerable to the disintermediation-re-intermediation dynamic that besets the executive education industry.

Business Schools' Custom Programs

Most business schools offer executive education programs that can be customized to organizations or to a specific function in an organization. Custom programs are usually offered either on campus or on the client's-premises. They try to bridge the gap between skill acquisition and skill application by adapting the teaching content and learning tools to the specific challenges facing each organization. They also try to bridge the gap between the relative inability of open enrollment programs to generate collaborative capital and organizations' need to turn individually-acquired skills into organizational capabilities.

Core Differentiators & Value Drivers. The differentiators of the business schools' custom programs are their intellectual capital, pedagogical base, and evaluative practices. Because they have been codified and routinized over decades, those practices make the business schools' custom programs more efficient and systematic than those of rivals.

Challenges & Constraints. The skills that the business schools claim to cultivate are constrained by academics' capabilities and the methods they've developed for measuring skill acquisition. Those skills inculcated are likely to be those whose development can be measured using instruments such as tests and exams. That results in a yawning gap between "customized" education and the "personalized" education that's necessary for skill-development to take place.

For example, the customization of a risk-management program for a company can mean any one of three different things. Although the content may be standardized, the participants could be chosen for their specific predicaments. Or content that illuminates problems faced in the past can be co-created with the organization. Or the content and the context of learning experiences can be co-designed with inputs from the organization's leadership and participants. These different levels of customization require different degrees of contextualization of skill-acquisition, with very different implications for skill transfer.

However, as the level of customization extends into the realm of personalized learning and co-designed courses, the business schools will be constrained by their institutional structures and skill bases, as we stated earlier. Consultancies, corporate universities, and even facilitator-moderated, cohort-based, online courses aren't subject to those constraints. Moreover, academics' pedagogical skill- bases are best suited to situations in which problems are well defined, and the skills required to solve them can be specified and tested by standard instruments. Their capabilities are often challenged when problems are ill-defined or their definition is contentious.

Strategy Consultancies' Executive Education Offerings

Strategy consultancies, such as Accenture, BCG, Bain, Deloitte, and McKinsey, provide an array of executive development experiences for clients. They provide training as part of consulting engagements, with learning occurring as part of the interventions. In a recent development, the Firms also offer training as a standalone offering – for example, the McKinsey Approach to Problem Solving – where the course is customized to tackle

specific capability gaps, or is offered to a variety of organizations trying to develop the same capability.

Core Differentiators & Value Drivers. The consultancy companies' offerings differ from competing products primarily because of their laser-like focus on the specific challenges facing an organization, and the generalized problem-solving capabilities of the management consultancy. Whereas in faculty-led programs in the business schools, learning occurs through teaching and evaluation, in the consultancies' capability-building-oriented programs, learning takes place through facilitation, mimesis, and the discovery of common ground, gaps, difficulties, and opportunities by participants.

In fact, the management consultancies' educational offerings are dictated by the capabilities and skill bases they develop as opposed to discipline-based content. "Managing Yourself," "Coping with Complexity," "Managing Diversity" … such programs are more likely to be encountered among the consultancies' offerings than, say, the pricing of derivatives or the design of information systems, which the business schools are more likely to offer.

The management consultancies' education programs trade signaling value for a contextualized approach to skill development, usually on-the-job and specific to the task at hand. There's a greater focus on tapping organizational sources of value by developing a common language that reduces coordination costs. When all the participants are teammates, the process builds the collaborative capital needed to turn individual skills into organizational capabilities. The consultancies' open and semi-open enrollment programs, into which participants from the same company self-select, often compete with, and offer higher value than, the business schools' open enrollment programs.

Challenges & Constraints. The management consultancies aren't constrained in terms of the scale, scope, timing, location, or content of their education programs by the non-negotiable contracts, high-cost structures, and institutional forces that impede curriculum development in the business schools. However, they are limited by the lack of pedagogical skills; being a solver of business problems doesn't automatically ensure being a teacher or

a generator of intellectual capital. The Firms are also constrained because they lack the evaluation- and certification-practices that are second nature to the business schools.

Moreover, the strategy consultancies' executive education offerings have, until recently, been limited by their client-specific commitments. That is, their education programs have been coupled with, and subordinated to, the goals of consulting engagements. In addition, the educational activities of the consultancies, which are typically organized as limited partnerships, have been constrained by low levels of investment. That can be offset in future by the consultancies accessing the capital markets, or by tapping donors and alumni to fund the Firms' investments in education.

Human Resource Consultancies' Development Programs

Human resource (HR) consultancies, such as Mercer Consulting, Optimum Talent, Hay Group, Korn/Ferry, and Kienbaum, offer individual and team-level evaluation, selection, and coaching services to companies. In the process, they have developed the capabilities to identify the causes of executive problems, to discover competency gaps, and develop data-intensive portraits of leadership abilities through focus groups, surveys, 360-degree performance evaluations, et al, and to identify the causes when collaboration breaks down among the members of top management teams. These specialized consultancies have complemented their diagnostic services with remedial coaching and therapeutic interventions at the individual and team levels for some time now.

More recently, the HR firms have started offering individual and team-based executive development programs aimed at remedying the leadership and relational challenges surfaced by clients. The programs are flexible in terms of their duration, can be modified to meet the specific requirements of clients and participants, and are informed by the precise needs the HR consultants have identified.

Core Differentiators & Value Drivers. In terms of their educational offerings, the HR consultancies differentiate themselves by their focus on the specific needs and characteristics of participants and teams. Unlike admission tests, which rarely inform program design in the business schools, the evaluation instruments used by the HR

consultancies are used to develop highly personalized and context-specific development programs.

The HR consultancies' individual and team-development programs target the participants' social and task milieus, and are more successful than the business schools' cohort-based programs at ensuring skills transfer. Here, the agency relationship is between the HR consultancy and the client company rather than between the provider and the participant as in the case of the business schools' programs. That ensures that the focus is on maximizing organizational value-drivers such as collaborative capital and intra-organizational connectivity.

Challenges & Constraints. The HR consultancies offering executive development programs face the same challenges as the strategy consultancies, such as a shortage of the pedagogic know-how that can translate into a repeatable set of training programs. Unlike the Firms, they have a battery of measurement instruments and tests that can be converted into a set of pre- and post- outcome measurements. Lacking expertise in many domains, they are less well-equipped to deliver programs in areas that require functional expertise. Due to their small size and capital structures -- most HR consultancies are partnerships with diffuse decision rights -- they face greater constraints in investing in education than even their multi-specialty counterparts.

Corporate Universities

Corporate universities, which provide skill-, self-, and team capability development programs, are usually staffed by full time coaches, trainers, teachers, and instructors. They can acquire, on a contractual basis, talent from within as well as outside their parent organizations to provide targeted, contextualized learning experiences to groups, teams, and individuals. Corporate universities in powerhouses such as Apple and Google routinely recruit leading executives, business school professors, and other external providers on a full time or contractual basis. They may well be setting the standards for executive development today.

Core Differentiators & Value Drivers. Corporate universities differentiate themselves from other providers of executive education by offering highly contextualized learning experiences. They include content relevant to the organization, delivered in the context in which the skills must be applied, and provide customized access to developmental experiences. At Apple University, for example, faculty members facilitate discussions using case studies based on Apple's decisions in the previous year! Google EDU serves as an in-house training program for employees using data analytics and other measures; it uses statistics from existing and former employees to recommend courses to managers at different stages of their careers.

Participants in corporate university programs can engage in discussions, simulations, and other learning experiences unconstrained by concerns about confidentiality. Their agency relationship with the organizations for which they work is even closer than that of the consultancies, so it affords them unrestricted access to internal information, and positions them to contribute directly to organizational objectives.

If a corporate university's intellectual property is recognized as a performance-driver in the parent's industry -- as is happening in the case of Apple, Google, Goldman Sachs, GE, and Procter & Gamble, for instance – it will gain in stature. The corporate university will then be able to attract executives from outside the company or sector, which will yield additional benefits. They include access to a diversity of ideas generated as part of the learning experience, and in-depth information about potential recruits (i.e., executives who attend the university's programs from outside the company). Corporate universities' role as selection engines that can help organizations identify the best candidates makes them ideal substitutes for the business schools in the talent market.

Challenges & Constraints. It's difficult to justify the large investments needed to set up an in-house university when resources are limited. After all, the value of such investments is volatile, uncertain, complex, and ambiguous: Volatile, because the values of the skills and capabilities can fall or disappear when market conditions change or when there are no executive sponsors; Uncertain and Complex because the link between leadership skills, managerial capabilities, and market conditions is subject to random factors; and

Ambiguous in that the mapping, measurement, and definition of the right skills and capabilities is seldom obvious. Barring a handful of exceptions -- such as those at Apple, Google, Goldman Sachs, GE, and Procter & Gamble -- corporate universities have exhibited a tendency to evolve into organizational overhead that provides logistical support to the HR function instead of growing into learning and development hubs.

Moreover, the development of the base of teaching experiences – be it the case study method or the action learning-based approach -- relies on the continuous, long-term accumulation of cases, learning scenarios, learning plans, and teaching blueprints. Because their endowments and the span of their activities fluctuates with the organization's quarterly performance, corporate universities are often unable to accumulate the knowhow necessary to make an impact.

Moreover, the scope and the scale of personal network development and signaling value in a corporate university is limited. Participants are drawn from within the organization. Their selection is often weighted in favor of organizational capability-development goals rather than the individual characteristics emphasized, for instance, by EMBA programs. However, a corporate university's benefits to the organization in terms of collaboration, connectivity, and coordination can be significant. Some -- GE's Crotonville, for instance, or Apple University -- are so highly regarded that attendance at its programs provides participants considerable signaling value.

The evaluative know-how (tests, exams, quizzes, problem sets, and so on) that allows the instantaneous measurement of skill acquisition is limited in corporate universities. However, these institutions are uniquely positioned to conduct the longitudinal studies that will establish whether a new capability or skill has been transferred to the organization. Corporate universities have less visibility into the best practices and leading-edge capabilities in other companies and industries than do the business schools, but that's unlikely to be a limiting factor for the best among them. In fact, these challenges are likely to diminish over time as the use of semantic versions of the Web, Web 3.0, proliferate in executive education.

Personal Learning Platforms

Drawing on fourth-generation learning management systems, and content from leading universities, think tanks, and online learning hubs -- such as Coursera, EdX, Lynda.com, Udacity, Udemy, and 2U.com -- Web 2.0 is rapidly stitching together a seamless fabric of on-demand massive, open online courses, and cohort- and certificate—based, small, private learning experiences (courses, classes, and modules). The personal learning platform, as we call it, can be used for cultivating a broad set of managerial abilities and competencies, largely grounded in algorithmic-functional-technical skills.

Personal learning platforms impart competencies whose acquisition can be measured using standard remote testing processes. These online developmental processes compete in scale, scope, and certification value with the open enrollment courses offered by the universities, and constitute complements to the offerings of corporate universities and consultancies. They can be deployed in either curated or un-curated form, and be interlaced with interactive developmental activities, such as field-based projects, to create a baseline of conversational and intellectual capital.

The learning platforms often embody content jointly owned by instructors and course heads, host organizations, and platform providers, so they are subject to complex incentive structures. Being distributed and ubiquitous, they can be exploited to support learning adhocracies, such as Singularity University and the Kauffmann Founders School. The latter use curated online content to support numerous learning and collaboration-oriented gatherings -- short courses and conferences -- that turn skill development into a continuous, distributed process.

Core Differentiators & Value Drivers. Massive, open, online courses (MOOCs), small private online courses (SPOCs), and the mixed-mode blended programs that they support are different from other executive education offerings in three ways. One, they provide a low-cost alternative to the open enrollment and custom development programs that transfer functional and technical skills. Two, they offer, for certain kinds of skills and capabilities, a path to individual and group-level certification at a far lower cost -- real and opportunity cost -- than do the alternatives. Three, these courses are open and adaptive; that is, they can

be appropriated by other providers, but they still capture enough value for the providers to continue operating in the executive education industry.

Challenges & Constraints. The online fabric of executive skill-development vehicles is being challenged mainly by the need to deliver the contextualized learning that helps transfer skills to neighboring domains and to appropriate the associated value. Another major challenge is developing and transferring the communicative, dialogical, relational, affective, and X-skills that organizations desire in their talent today.

The adaptability of such offerings nevertheless helps deliver curated, contextualized programs based on general purpose, non-contextualized languages, models, tools, and techniques, presented under the guidance of coaches and educational designers affiliated with HR groups and corporate universities. With the debut of fifth and sixth generation learning management systems, the fabric of interaction in online courses will become richer, resulting in an increase in the corresponding skill acquisition. For instance, the recent ratification of WebRTC as a signaling framework for shared video sessions in multi-user environments enables cohorts of up to 30 students to participate in online discussions, which imparts the feel of a face-to-face discussion.

However, the set of cultural norms associated with e-learning, which limits its certification and signaling value, poses a significant challenge to the network of MOOCs and SPOCs. Participants, who came of age before e-learning did, may have a bias against it. In the long run, just as the growth of online platforms such as EdX and Coursera relied on tipping points in the installed base of broadband connections, the scalability of learning management systems, and the availability of content, so too will the steady increase in the number of executives schooled in the Khan Academy-era create a tipping-point in the acceptance of e-learning.

III. How Executive Education Providers Interact: Mapping Substitutes and Complements for the Sources of Value

Each executive development program delivers a different value to participants and organizations, which implies that there are trade-offs between the various dimensions, or

vectors, of value. In Figure 3.3, we show, along the organizations' and participants' value-vectors, how different offerings complement and substitute each other [Moldoveanu and Narayandas, 2016, 1; Moldoveanu and Narayandas, 2016, 2]. Because digitalization allows companies greater visibility into both the educational offering and the ROI on the learning-relevant outcomes, developing a substitutes-and-complements map can, we believe, guide an efficient restructuring of the executive education industry.

In the next section, we will discuss how, first, participants and then, companies think about substitutes and complements on each of the value dimensions.

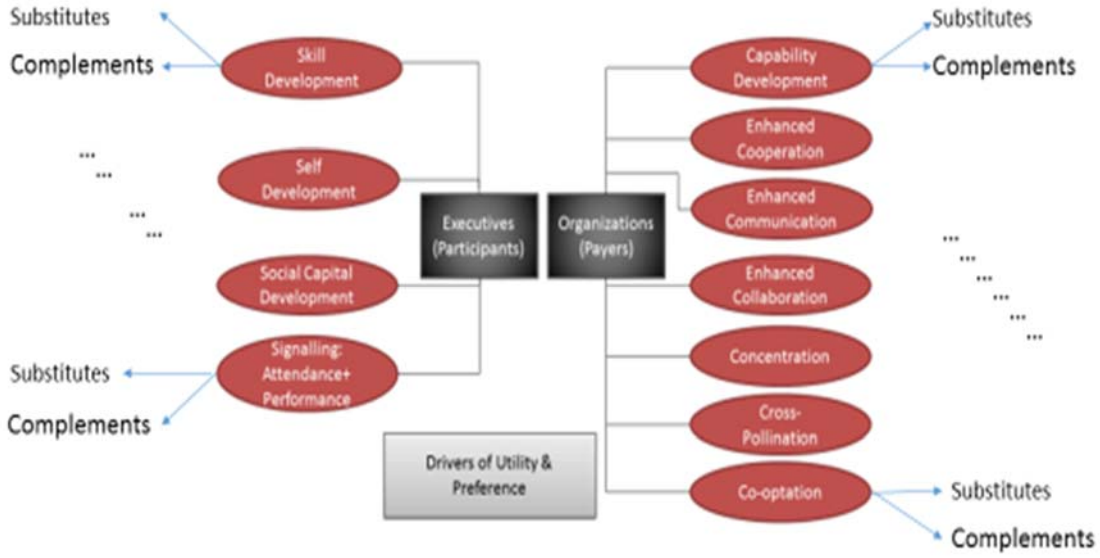

Figure 3.3. Using a map of executives' and organizations' objectives to chart the substitutes and complements among executive education program suppliers.

Participants' Value Substitutes & Complements

Skill Development Substitutes and Complements. The substitutes for skill development vary with the type of skill and the context in which it will be applied. At one end of the spectrum are functional skills (e.g., financial statement analysis) that are predominantly cognitive (involving reasoning and calculation) in nature and algorithmic (do this first, this next) in terms of usage. In this space, there will be growing competition between the traditional lecture-and-case discussion and the associated evaluation protocols, and online

vehicles, with or without on-the-ground coaching in the application of the skill in the focal context.

Skills that are either non-cognitive (such as empathy and resilience) or mixed (dialogical, deliberative, and discursive skills, for instance) lie at the other end of the spectrum. Those are best developed in the social environments of action learning, small group discussions, and coaching interventions that enable participants to develop skillsets whose measurement cannot be automated. At this end, the competition is between in-house corporate development programs – which include coaching, mentorship, and guidance – and customized, intensive, off-site programs that provide developmental paths for individual executives.

Across this spectrum, though, the successful development of skills hinges on the synergies between the forces of socialization, guidance, coaching, and discussion that operate in conjunction to produce the conversational capital that promotes the internalization of concepts, higher levels of skill acquisition, and ensures the more effective transfer of skills to the relevant context.

In the same way, complements differ across the spectrum of skills development. At the cognitive-algorithmic-functional end, there is a great deal of complementarity between large-scale, online, skill-to-desktop platforms and classroom-based instructional techniques. The former use functional specialists and coaches to guide participants' application of the skills they've learned to their work environments while the latter use a community of practice -- such as the alumni of past programs -- as a mutual aid and self-help group.

At the non-algorithmic relational end of the spectrum, the social medium of skill development -- participants who serve as sources of guidance and feedback for each other, for instance -- complements the coach, intermediator, or facilitator as well as the content. A community of managers willing to provide feedback, having gone through the program, is often a pre-requisite for sustaining the transfer of skills to the organization.

Self-Development Substitutes and Complements. The self-development value of executive programs can be derived from the variety of experiences offered by education providers. The experiences include personalized coaching and mentoring imparted on the job or at retreats; on-site mindset transformation exercises conducted by trainers or consultancies; and off-site workshops and facilitated sessions, in which participants help one another in the context of a transformation project.

The self-restorative -- refresh and recharge -- objective of executive development programs lies at the boundary between wellness retreats that incorporate a self-development dimension and conventional off-sites that afford participants a physiological medium in which they can disconnect from their daily routines. The complements to the self-development exercises are co-workers that want to transform their style of interacting, or a set of like-minded participants who desire to engage in a process of self-development, guided by an expert. The group-related aspect of self-transformation and self-development is well known to executive education coaches and group therapists [Yalom, 1993]. To achieve the refresh-and-recharge objective requires a dynamic between the environment and the process that enables participants to sustain a state of disengagement without slipping into the "vacation" mindset created by retreats that focus only on bodily wellbeing.

Social Capital Enhancement Substitutes and Complements. When it comes to social capital enhancement, the development of function-specific intra-organizational networks can be enhanced through facilitated e-learning programs. The participants in these programs can be broken up into groups of like-minded learners who can share similar aims and problems, or participants from the same function, who can share learning experiences.

The development of inter-organizational and inter-industry networks can be facilitated by creating cohorts from different organizations, which are then imparted functional skills through different media. It can also be done through off-site programs that recruit participants from various industries or from different companies in the same industry. The development of intra-organizational networks that cross structures, functions, and hierarchical roles can be facilitated by intensive, thematic, on-site development

programs as well as cross-functional, cross-hierarchical knowledge platforms that encourage collaboration, not just communication.

Social capital development depends on the conditions under which participants come together. Joint relevance, joint purpose, and joint attention are key to forging meaningful relationships within and between organizations. As we argued in one of earlier working papers [Moldoveanu and Narayandas, 2016, 1], focusing on networking as the sole source of value can undermine an executive education program. Executives will come partly to learn a meaningful skill and partly to meet others, but they are less likely to do so if there are no learning objectives or development goals. Thus, the content of the skill-development process complements the socializing function of executive education programs.

Equally important is the presence of a trust conduit -- a teacher, facilitator, instructor, or coach -- who, trusted by all the participants, functions as an arbiter in interactions. The alternative is a collaborative platform that tells participants what they need to know about each other, so they can develop, by themselves, trust in, and beliefs about, each other's integrity and competence.

Signaling-Value Substitutes and Complements. Executive education programs are all substitutes for one other to the extent that they communicate to the talent market, and organizations, similar levels of commitment by participants and organizations. Similar-status programs, reflected by their price points and selectivity, will substitute for one another more readily than programs of lower status and selectivity. Today's leaders in executive development – Harvard, Stanford, Wharton, Duke, INSEAD, and IMD, among the business schools that offer large-scale open enrollment programs; McKinsey and BCG, among the management consultancies; and London Business School, Columbia, Kellogg, IE, and CEIBS among the EMBA program-providers -- enjoy a significant advantage in terms of providing signaling value.

All the alternatives to the premium programs – such as online nanodegrees and certificates procured from online education platforms – vie with one another. However, given the burgeoning popularity of online degrees and courses, and the combination of

cognitive skills, technical skills, and X-factor skills needed to complete an online course without external reinforcement, it is possible that these courses will acquire significant signaling value in the future. The higher value of online certification will, for instance, compensate for the lack of signaling value in registering for such courses.

At the high certification-value end of the spectrum, the substitutes will be programs in which the links between the developed and the requisite skill can be measured. The value of certification is predicated on the problematic assumption -- as we explained in our first paper [Moldoveanu and Narayandas, 2016, 1] -- that skills can be transferred to contexts outside those in which they are developed. Here, there's substitutability between EMBA programs that rely on uniform content and large open-enrollment programs (Harvard Business School's General Management Program and Professional Leadership Development program, for instance). At the low certification value end lie customized programs that cannot easily be compared to, or distilled into, a common skill base.

The emergence of online education providers has increased the transparency of the skill sets that executives acquire because the new providers break up a skill into learnable chunks. For instance, the increased popularity of nanodegrees in computer science indicates the importance of breaking a composite set of professional skills into bite-sized chunks -- such as Java programming, database programming, machine learning basics, and so on -- that employers can track. The certification value of the programs increases because of the greater transparency around the specific components of the skill being developed and the participants' level of proficiency. In the same way, the way online courses break up skills into concentrated bits may increase their value tomorrow, allowing them to compete head-on with EMBA and large-scale open enrollment programs.

Educational signals, being multidimensional signs of participants' inherent abilities and acquired skills, are often ambiguous. The signaling value of admission to a skill-development program, for instance, is determined by the quality of the sponsoring organization's selection process, the program's selectivity, and its perceived status. A manager selected by a Fortune-100 organization to participate in a well-recognized, top-

ranked, open enrollment program will gain a higher signaling value than one selected by the same organization to participate in a lower-status program.

Similarly, certification value is subject to the existence of multiple complements. The transparency of the skill sets inculcated by a program will interact with its rigor and status to produce different levels of certification value. That transparency must include methods of measuring the skill set's acquisition within and outside the development context, and the degree to which the skill base is well-established (e.g., balance sheet analysis is a well-established skill) and measurable using standardized testing instruments.

As we mentioned earlier, the completion of some programs can explicitly certify the development of a skill and, at the same time, implicitly signal the possession of a more important skill: The X-factor skills which signal that the executive possessed the discipline required to complete the program. In such cases, the complements of the high-certification value programs should include the X-factor skills required to complete the program even if they aren't explicitly mentioned by the education provider.

Providers' Value Complements & Substitutes

Let us now turn to how executive education providers complement each other, and substitute one another, on the metrics that are most relevant to companies, which pay for executive education programs.

Substitutes and Complements for Capability and Competency Formation. In most organizations, there's little awareness of which skills will deliver the capabilities they desire. In general, substitutes can be grouped into the two ends of a spectrum.

At one end, EMBA and open enrollment programs with canonical curricula that develop generic, just-in-case skills substitute for one another. Such skills are usually sought by organizations that don't quite know what is needed to turn individual human capital into organizational capability. At the other end, organizations that know what skills they require to build their capability bases will choose between training exercises and capability-building interventions designed to impart organizational skills to a team of participants. For organizations discovering on-the-fly the skills they need for fresh capabilities, skills-

on-demand programs -- which include online platforms and on-call coaches and functional knowledge experts -- will be substitutes for open enrollment programs.

The development of new organizational capabilities is usually related to the acquisition of specific sets of skills. For example, agile response capabilities are a fusion of technical skills (database design and management, information technology infrastructure maintenance); new technology and operational skills (new CRM system, new inventory tracking database); and a set of relational, affective, communicative, and X-factor skills that support the coordination of large teams and the development of trust with minimal communication. The means to develop those tightly-coupled capability sets must be heavily socialized (within a group) and contextualized (within the organization), but the capabilities that are less dependent on the coordination of multiple skill sets (compliance with a new ISO process framework, for instance) will increasingly depend on the use of technology.

Substitutes and Complements for Communication, Coordination, and Cultural Value. Professionally-relevant conversational capital can be developed by executives participating in on-site or off-site functional skill-development programs sponsored by one more organizations. It can also be generated by creating carefully-chosen organizational cohorts on online platforms, which the participants can use for communication and coordination because of a shared language system.

New organizational communication codes and coordination mechanisms are built on complementary ways of delivering content. To overlay a new language on new, or existing, sets of practices requires two things. One, a pedagogical design that targets maximal applicability across a broad range of scenarios akin to designing for the maximum transferability of skills to far contexts. And two, support of the new ways of communicating, often using the distributed learning infrastructure of Web 2.0, to render concepts into effective norms of communication and coordination [Moldoveanu, 2001].

Substitutes and Complements for Cooperation & Collaboration Value. The habitus, or disposition, to work together to solve a problem is critical to the development of both

collaborative practice and cooperative norms. Executive development programs that bring participants from the same organization together to work on problems of joint relevance -- for instance, custom programs based on action learning principles and problem-solution-centered programs delivered on the job -- will be substitutes for each other at the high-touch end of the spectrum.

The low-touch end -- online learning and collaborative platforms -- fare poorly in terms of the development of collaborative capital since the level of intimacy afforded to participants is, by design, low. However, new generations of collaborative and joint learning platforms are enabling managers to achieve ever higher levels of rhythm and intimacy. They may, in future, provide effective alternatives to the high-touch interventions required for trust-building.

The degree of complementarity between program content -- jointly and uniformly, not just individually -- and the elements of context -- opportunities for learning that provide credible tests of trustworthiness and the ability to trust -- determine whether the informal networks spawned by participation are immune to subversion and erosion. These complements entail both design and support for the interactions among participants at dedicated forums, the mapping of projects, and tracking platforms that together nurture an organization's collaborative capital.

Substitutes and Complements for Concentration Value. The concentration value of executive education programs is maximized when they increase an organization's ability to track skill development, and optimize the allocation of roles to executives with newly-developed skill sets. That is being further enabled by the development of skill-transfer measurement systems, which allow organizations to measure the benefit of the skills learnt at the level of the group and the individual executive.

Synchronous online programs deliver cohort and group-based developmental experiences to managers throughout an organization in a specific location, at a specific time, offsite or on site, so they are a substitute for traditional offerings. Meanwhile, the burgeoning demand for skills on demand and the evolution of learning management

systems are also rendering small, cohort-based, private, and mediated online courses increasingly viable as alternatives to face-to-face offerings.

Substitutes and Complements for the Co-Optation Value of Executive Programs. Executive development programs substitute for one another to the extent that they are all subsidized by organizations that nominate executives to participate in them. The incentives for the selected participants include recognition between, and across, organizations. High-prestige, high-status programs that offer participants significant developmental or wellbeing benefits will be substitutes for each other on this dimension. Programs that optimally combine the benefits of wellbeing and skill-enhancement, along with recognition, ensure that their certificates become recognizable signals, the value of which frequently transcends organizational boundaries.

Substitutes and Complements for Cross-Pollination Value. Cross-industry recruitment can quickly inform an organization about practices and ideas, and opportunistic hires can substitute for any program. For instance, strategy consultancies such as McKinsey and BCG can function as cross-pollinating agencies that inform, for example, an insurance company about best billing practices from the telecom industry; a media company about content-management practices in the software industry, and so forth. In the face of viable substitutes, the realization of the mutual learning objectives of executive education programs must rely on a rich, interactive environment that facilitates inter-participant learning. Executive programs that deliver on that metric will create environments that afford participants repeated opportunities to discuss, learn, observe, try, and reflect in ways that allow the emergence of good ideas and best practices.

IV. The Core Learning Vehicles: Where and How Are Skills and Capabilities Acquired and Transferred?

The success of executive education programs depends on whether the participants develop skills, and if those skills are applied in contexts different from those in which they were acquired. In our previous working papers [Moldoveanu and Narayandas, 2016, 1 and

2], we showed how the disruptive forces of disaggregation, disintermediation, and de-coupling, driven by technological and cultural factors, are likely to drive executive development to place greater emphasis on the core sources of value for organizations. Those are, notably, skill acquisition and skill transfer, and the conversion of individual skills into organizational capabilities.

Skill development and skill transfer being the raison d'être of executive development, it is important to examine executive education programs to understand their capacity to develop and transfer the skills and capabilities organizations seek. In this section, we will evaluate the teaching components of the executive education programs to see how well they help develop and transfer skills. Since the personal learning cloud -- asynchronously available learning experiences such as videotaped lectures, quizzes, problem sets, etc. – has become a viable, low-cost learning option today, the skill acquisition and skill transfer characteristics of every other learning vehicle must be benchmarked against it.

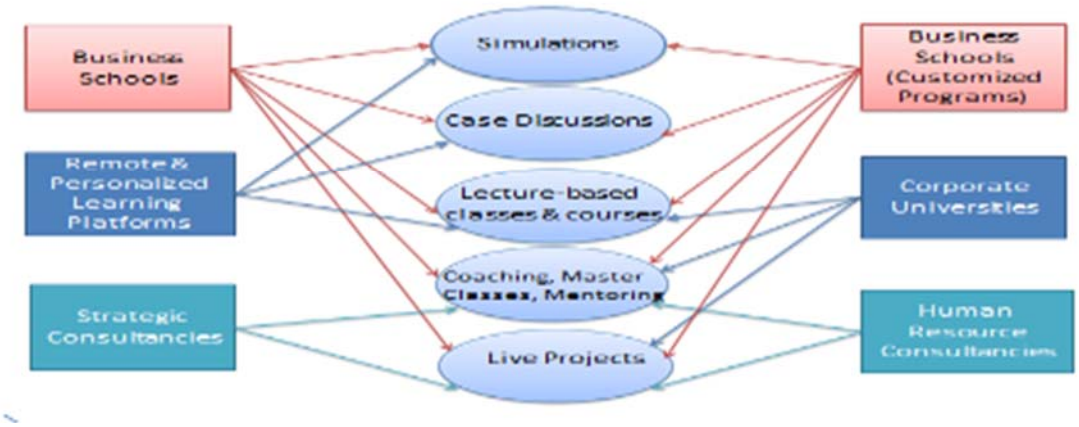

Figure 3.4 A map of the skill acquisition and transfer vehicles used by executive education providers as the building blocks of executive development today.

Lecture and Test-Based Courses

Lecture-based classes and courses, which lie at the core of the EMBA and open enrollment programs offered by the business schools, are characterized by structured presentations related to an instructor's area of expertise, and participants' interest clarified,

challenged, applied, and extended in discussions guided by the instructor and influenced by the participants. Presentations may be preceded by work, and sequences that form a course module may be followed by work (problem sets, tests) designed to measure the extent to which skill acquisition has been achieved. The presence of diverse participants in the classroom amplifies the impact of the content; the participants learn from each other's questions, answers, and responses.

Skill Acquisition: What Is Learned? Lecture-based courses are focused on imparting functional, cognitive, and algorithmic skills, amenable to testing and grading systems, honed by centuries of application in the higher education system. The skills are acquired because the ideas are imprinted via discussions and exercises, and measured by participants' performance on quizzes and exams.

Skill Transfer: Where & How? The literature on skill transfer suggests that even the best-designed content and learning materials, when delivered in lecture and test formats, don't generate skills that transfer to contexts spatiotemporally, socially, or functionally far removed from the locus of their acquisition. Different ways of teaching are associated with better skill transfer results [Billing, 2007], but those are mostly project- and practice-based methods that "invert" the classroom, eliminating the epistemic privilege that the lecturer normally enjoys. The personal learning cloud threatens to substitute lecture-based courses by deploying user-optimized regimes of chunked learning and spaced learning [Kelley and Watson, 2015]. Such learning techniques can maximize skill-acquisition more than high-cost, high-value, in-person classroom time can.

Case Discussions

Case discussions are a sub-class of discussion-based teaching, the roots of which can be traced to the writings of John Dewey, one of the originators of the Oxbridge method of engaged debate as a means of developing judgment through relentless, open dialogue. The case discussion, closely associated with the Harvard Business School, is the dominant method of classroom teaching in most of the top MBA and EMBA programs globally.

Some form of discussion-based learning shapes pedagogical design in most of the open enrollment and custom programs run by the business schools.

Implicit in the case study discussion is a data-rich narrative of a managerial predicament, which usually reflects the perspectives of multiple actors with incompatible or conflicting interests, different framings of the situation, and personal dispositions. The purpose of a case discussion is to promote the acquisition of a "language" system and to develop an associated set of models and methods necessary to understand the situation or predicament. It emulates an executive team in which participants identify sufficiently with the described circumstances to engage in a discussion. That generates a counterfactual exploration and learning environment, in which participants are afforded the opportunity to explore, through structured dialogue, what might have, could have, and should have been done by the executives in the case study.

Alternatively, case discussion can take the form of the creation of a business communication lab, where participants generate, advocate for, respond to inquiries and requests for clarifications, and defend or modify their opinions in response to challenges or actionable options for the organization featured in the case. They can experiment by communicating moves and countermoves in a language game constrained by their knowledge and the case's informational base.

The role of the case teacher, instructor, or, more aptly, facilitator can vary. It can range from being a light-touch coordinator of the discussions and a gentle prompter of queries, objections, and challenges to being an involved framer of the discussion through the precise wording and timing of questions, and the active arbiter for the verbal game that unfolds. As often happens, he or she may be the collator and interpreter, after each segment, of the discussants' insights.

Skill Acquisition: What Is Learned? A case discussion's objectives start with the appropriation of the "language" system (e.g., for entrepreneurial finance, CEO succession, for managing software product development when technologies are changing quickly, and so on) which makes the protagonists' predicament intelligible. It also helps develop a set of cognitive, affective, relational, and communicative skills that transcend the context; for

example, participants can argue, after analyzing the predicament faced by the managers in a case study, for a specific course of action to be adopted.

The discussions can also include other participants' arguments, defending or modifying ideas while responding to objections while always remaining open to a good counter-argument. The acquisition of those skills depends on the quality of the discussion space that the classroom leader creates by framing the different loci of the dialogue as well as the timing of his or her feedback regarding participants' ability to sustain executive level discourse.

Skill Transfer: Where & How? Skill transfer involves multiple contexts, as we have seen earlier, including knowledge (that is, the proximity of the participant's situation to the experiential circumstance of the protagonist); socio-cultural factors (such as the participant's association with one, or more, teams, organizations, or industries); physical locations (on-site or off-site); and temporal factors (such as whether it happens immediately after a discussion or much later). Logically, the cognitive skills associated with the mastery of the functional and technical language systems of a case study are likely to transfer most effectively from case studies about a participant's industry, taught on the premises by a facilitator familiar with the host organization.

The transfer of the cognitive and non-cognitive skills that form a competence base for dialogue and communication facilitate executive-level discussions. The dimensions relevant for measuring the distance of skill-transfer are knowledge (same subject matter, kind of problem, solution search space) and social (same people, in the same roles, same organization, same industry) domains. At the near transfer end, cases that involve managers in client organizations can enable new conversations. In those cases, the case discussion transfers a set of communication skills that will enhance the participants' ability to make sense of the challenge they face. Group dialogue and communications can be enhanced by skill-building exercises in which the managers participate as a group.

At the far transfer end of the spectrum lie the EMBA and open enrollment programs' case discussions. Participants, drawn from several organizations and industries, iteratively build, through discussion of cases about other organizations and industries,

competence in dialogue and discussion. That competence is contingent on the presence or the acquisition of a set of individual-level communicative and dialogical skills. The transfer of those skills to the relevant setting in the participant organizations can be difficult because it is far removed from the locus of acquisition; different groups, roles, topics, and functions of public discourse make the transfer a challenge.

Electronic learning environments focus on the interaction between participants and text. Those environments cannot replicate the skill-building environment of a case discussion led by an expert facilitator. Textured, contextualized case discussions, delicately choreographed by expert facilitators whose awareness includes the physiognomic characteristics and gestures of participants, is not substitutable by the learning cloud -- yet. The discussion forums that are part of remote learning environments are, for the most part, unable to exercise the sort of dialogical scorekeeping required by high-level language games.

The new interaction fabric that is being prototyped online has evolved beyond linearly-displayed, temporally asynchronous sets of interactions between users, as we will see later. Increasingly, the new digital environments offer sophisticated ensembles of users, facilitators, and materials. They are orchestrated in ways -- such as the participants' connectedness and insight into each other's affective and cognitive states -- that transcend the classroom environment of the traditional case discussion.

Simulations

Simulations are learning environments constructed to replicate the structural and dynamical features of business environments within the guided, de-incentivized setting of a workgroup or class. Roles are assigned to participants as are rules to their modes of interaction, which may be trading games, negotiation simulations, market share competitions etc. The participants infer successful patterns of action (skilled behavior) from their performance in the games.

Simulations can affect learning either through top-down pedagogies, where the principles of successful behavior are stated and exercised during the simulation, or bottom-up pedagogies, whereby the principles, including many not contemplated by the designer,

are inferred, often through dialogue. Viewed through that lens, a case discussion is a specific form of simulation; specifically, the simulation of high-level executive dialogue about a managerial predicament. The difference is that the rules and mechanisms of successful behavior are not explicitly communicated during a case discussion.

Skill Acquisition: What Is Learned? In a simulation, skill acquisition occurs primarily through the group practice of procedures. For instance, a simulation of oligopolistic competition in a commodity market will involve teams that enter their strategies into a central clearinghouse that assigns payoffs based on stochastic demand fluctuations and the interdependent strategic choices of other teams. That imparts forecasting and strategic reasoning skills to the participants.

Other skills that can be developed through simulations are high-level cognitive competencies: Forecasting the evolution of nonlinear environments through the beer game; interactive reasoning in cooperative and competitive game scenarios through oligopolistic market simulations; whole business simulations that are based on multi-agent models of an organization's functions, competitors, suppliers, and clients; non-cognitive, relational skills that are imparted through simulations of interpersonal and organizational dynamics. Some examples of the latter include enacted negotiations and reenactments of power-and-influence episodes, in which participants have assigned roles, but can also improvise.

Skill Transfer: Where & How? The skill transfer capabilities of a simulation depend, as with case discussions, on the transfer distances and the learning and interaction mode (socialized, feedback-intensive, or multi-modal). Simulations that target the development of specific skill sets (e.g., demand forecasting in a buyer-seller system) are more likely to succeed when one of two conditions are met. First, the simulations are heavily contextualized; that is, they are conducted with data from the host organization, and the participants are debriefed in ways that inform the organization's future practices. Second, the simulations are optimized for transfer by being repeated in different environments to establish the robustness of the behavior patterns they endorse.

The transfer properties of simulations that aim to develop complicated, partly undefined bundles of cognitive, affective skills often relate to social context. For example, learning how to emote to counteract power moves in an EMBA classroom simulation of employer-employee dynamics may have little impact on the participants' ability to emote that way during a team meeting. Although the transferability of non-cognitive and relational skills is far from understood, it seems plausible that the transfer of those skills is even more dependent on the proximity between the loci of acquisition and application than so far assumed.

The replicability of simulation-based learning experiences in the personal learning cloud depends on the skill sets that organizations need. Web environments, particularly 2-D-gaming and 3-D-gaming environments, seem tailor made for developing simulations aimed at cultivating predictive, analytical, perceptual, and even X-factor skills. The last-named can be done, for instance, by imposing time-limits on critical decisions that affect participant outcomes. The imminent generational shifts to the Millennials and Generation Z in the US are likely to extend the degree to which gaming environments will be accepted as substitutes for simulation-based classroom experiences.

It's more difficult to create Web-based simulations that exploit role-playing, and generate emotional and communicative patterns to build affective relational and cognitive skills. However, the conjunction of affective computing and machine learning with the development of learning environments attuned to the feelings and visceral states of remote participants offers a path by which simulations can be designed even for remote participation.

Capstone and "Live" Projects: The Field-and-Forum or Action Learning Approach

The recent growth in the use of "live" projects and "live" cases in both MBA and executive programs is a sign of the skill-transfer gap in executive education. "Live" cases are two levels closer to reality than traditional case studies, which document situations that have been already resolved and can, therefore, be easily researched online. They are also more "real" than the raw cases introduced by the Yale School of Management in 2000,

which describe a situation that participants must address by studying original data and documents.

"Live" cases are neither fully developed nor have they played out completely. Like co-consulting projects, they are current, not easily described, and unfold as participants and facilitators engage with the situation. They are typically structured as either consulting projects for participants, when run alongside a company by a business school, or as consulting engagements, when a consultancy is trying to solve a client's problems.

Smart EMBA programs are starting to adopt the field-and-forum approach developed by management consultancies such as McKinsey & Co. The approach brings participants together for intensive co-consultation and mutual feedback along specific dimensions of a problem, but without any limits on the kinds of problem that are admissible. Consultancies and business schools also employ action learning, whereby participants, under the guidance of facilitators, engage in structured inquiry that's designed to being about organizational change (e.g., the project management discipline enforced by a new platform) or solutions (a new product design). In the process, the participants learn from both their successes and failures by tracking their actions and the resulting outcomes.

Skill Acquisition: What Is Learned? "Live" cases and co-consulting projects, such as simulations, help the development of skill sets such as data modeling, decision making, and project planning. They bridge an important gap at the cognitive-functional-technical end of the spectrum between the ability to solve a problem that has already been formulated to everyone's satisfaction, and to pose a problem, sometimes iteratively, in a way that the solution secures agreement from several parties. At the other end of the spectrum, the affective-relational-communicative skills required to navigate, as a team, the uncertainties in a "live" case make the approach useful for developing the framing, interpretation, co-reasoning, and co-creation skills usually associated with facilitators, not participants.

Skill Transfer: Where & How? "Live" cases, because they introduce indeterminacy and immediacy to the learning experience, shift the locus of learning closer to the locus of application than can simulations and case studies. The predicaments in "live" cases aren't

fully defined, and the actions executed by participants change the organization –the "action" in action learning --so a level of involvement highly correlated with skill transfer to far contexts is created [see, for instance, Gray and Orasanu, 1989; Phillips and Alexander, 1999]. Due to the differences in distance, there will be significant differences in skill transfer between "live" cases that involve participants' organizations (as is the case with action learning and field-and-forum interventions) and those set in other organizations in which executives participate passively, as happens in MBA and EMBA capstone projects.

Although it may seem that "live" cases aren't replicable online, they are characterized on the Net by a greater density of unstructured, asynchronous, participant-to-participant-to-organization interactions than structured and synchronous participant-instructor interactions. Moreover, their most successful embodiment has been as field-and-forum programs. In those programs, participants engage in framing and solving their organizational problems with guidance from facilitators and one another (the field component, which consumes the most time). They also share blueprints for action, and the lessons learned in the field (the forum, which consumes short bursts of concentrated time). The growing capacity of online learning environments to capture the presence of participants -- using eye-tracking and gaze-following technologies and synchronous multi-person sessions -- is increasingly making the remote creation of "live" cases and action learning feasible.

Transformational Interventions: Coaching, Master Class, and Mentoring Programs

Many executive development programs offer individual and small-group-centered coaching, or other personalized feedback-intensive self-development modules. They are meant to help individuals and teams acquire higher levels of awareness and skills not amenable to development in structured environments. They are usually relational, affective, and communicative skills (e.g., the ability to express yourself precisely during contentious conversations to ensure that the points of view of team members radically different from the majority are not overlooked). Such interventions have become more

common in executive development programs, and are frequently offered by HR consultancies as well as by business schools and larger consultancies.

Skill Acquisition. Tailored interventions and coaching sessions differ from other executive programs in that their focus is often emergent, and, like programs trying to develop technical and functional skills, they depend on the individual, team, and context. The regime of feedback and assessment, being tailored to the individual, team, and situation, cannot be standardized across programs. Skill-acquisition can thus be measured only with respect to program participants' skill levels, whether determined by self-assessment or a poll (e.g., 360-degree feedback). That makes it tough to make claims about the skill-acquisition properties of such interventions. The popularity of one-on-one and one-on-few formats for developmental interventions suggests that they are valuable to participants and their organizations, but it doesn't necessarily speak to their skill acquisition ability. After all, it is difficult to distinguish between the therapeutic value of those interventions and their skill-development characteristics.

A notable exception, we find, is the master class [Moldoveanu and Martin, 2008] or self-development lab [Moldoveanu, 2014; Moldoveanu and Djikic, 2017]. In master classes, dedicated coaches, trained in psychodynamic processes and communications skills, work with individuals and small groups to develop the skills related to executive performances such as the executive committee meeting, the pitch, the analytical presentation, the board meeting et al. Each involves specific combinations of text, sub-text, and context aimed at achieving targeted developmental interventions in individual and team environments (e.g., second-by-second analyses of taped presentations by an individual and group discussions). The modules emphasize learning over teaching, and use individual, timely, and pointed feedback to help participants achieve higher levels of intra- and inter-personal competence.

Skill Transfer. The skill-transfer properties of coaching sessions can be described only with reference to some skills. Skills such as the articulation of the emotional states of the self and others, which are the objectives of coaching interventions, are highly susceptible to the

social and functional context of their application. So are team-level interventions that enhance the degree to which difficult dialog and conversation is possible.

The contextualized, on-the-job interventions delivered by corporate universities, HR consultancies, and the custom programs of the business schools will exhibit the highest levels of skill transfer and impact, the only exception being individual and team interventions delivered through focused master classes. Master classes attempt to develop complex skill sets through rich, personalized feedback about a key executive performance, the skill sets being specifiable so that their acquisition and transfer can be tracked. That also helps explore ways in which skills-transfer can be increased through different models of interaction and learning.

V. Charting the Evolution of the Building Blocks of Executive Education

The central challenge facing executive development programs at a time of disintermediation, disintegration, and decoupling of the sources of value is addressing the gap between the skills that executives need to apply in their roles, and the skills they acquire through participation in executive development programs [Moldoveanu and Narayandas, 2016, 1 and 2]. That gap has two components: Between the skills needed and offered, and between the acquisition of skills and their application, as we have discussed earlier. The latter poses an urgent challenge to existing providers of executive education.

As the organizations that pay for the participation of executives in management development programs acquire the capability to deliver on-the-job training that co-locate skill acquisition and skill application, off-site training programs will need to re-invent themselves -- quickly. Otherwise, they will not be able to increase the probability of skill transfer given the distance between the locus of acquisition and the locus of application. They can manage that by altering the core vehicles (case studies, lectures, coaching, and so forth) used to develop skills and capabilities compared to providers' current positions in the skills transfer space [Moldoveanu and Narayandas, 2016, 1 and 2].

The exhibit below (Figure 3.5) depicts the diminishing returns to executive development as a function of the distance between where skills are acquired and where they will be applied, and identifies the trajectories along which the various skill-

development vehicles must change. As executive education programs come to grips with the effects of diminishing returns to skill development, and as talent and learning officers come into possession of an expanded and searchable set of development modules – whose ROI on learning can be measured -- executive program designers and developers face a choice: They can either retreat – or adapt.

Education-providers can adapt in one of two ways: They can push learning content and experience to the job, using personalized learning vehicles and platforms to develop skills only in the context of executives' worlds, thereby minimizing transfer distance. Alternately, they can re-design the learning experiences they offer in distant settings (aka the classroom) to maximize the transferability of acquired skills. Both responses assume that the different learning vehicles we have discussed in this paper will evolve along the lines we will describe next.

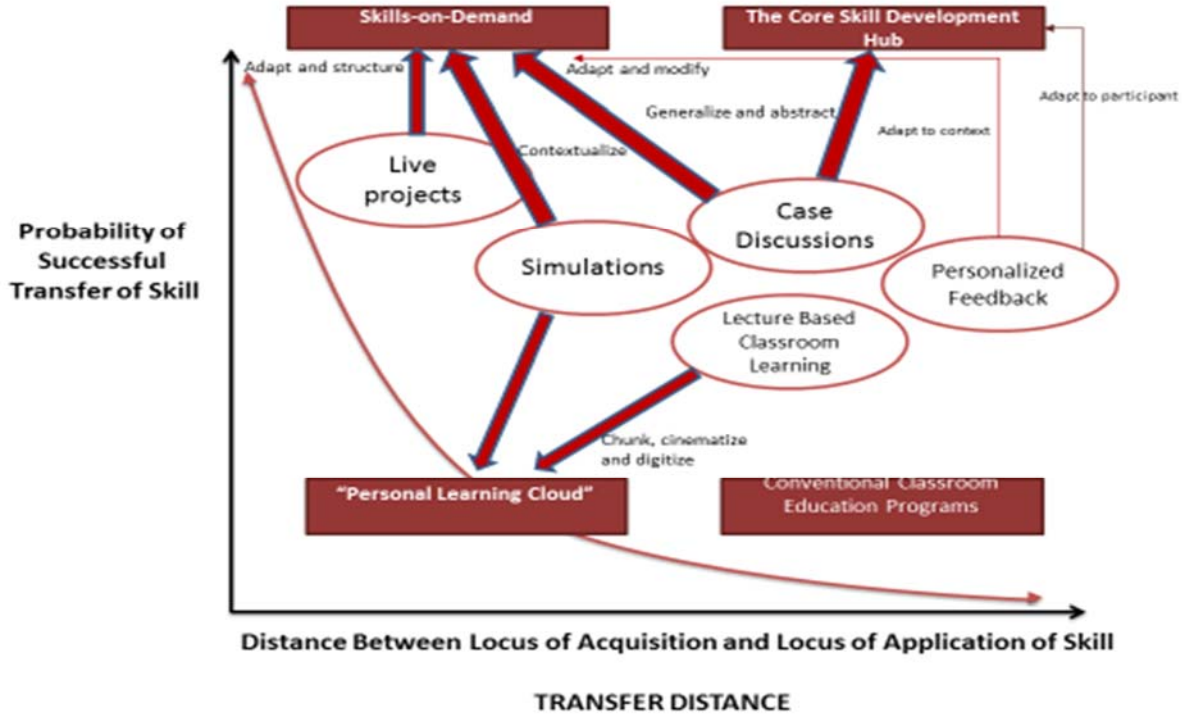

Figure 3.5. Mapping the trajectory of the evolution of the building blocks of skill development by skill transfer distance and the probability of successful skill transfer.

Lectures and low-interaction content (including quizzes and exams) can be transferred to the personalized learning cloud, which will enable low-cost reproduction of the learning experience on an individual basis. Standard options, such as rewind, repeat, slow down, speed up, and participant-level analytics with respect to performance, and the customization of content to learning style (adaptive learning mechanics) will increase their value, both to the executive and the organization.

Case discussions can shift towards greater contextualization by, for instance, documenting situations about the participant or organization and being delivered in-house. They can also move towards greater levels of abstraction and generalization by, say, cultivating specific conversational and dialogical skill sets when delivered off-site.

Simulations can be contextualized to organization-specific situations (e.g., difficult conversations about burning issues) and offered internally through on-the-job capability-building vehicles. They could also be transferred to remote, multi-player, online settings, in which user interaction and behavior can be mapped, tracked, and analyzed. That will allow simulations to be synthesized into learning experiences that are integrated with online lectures and quizzes.

"Live" projects can exploit the greater visibility into, and the ability to track, executives' tasks, routines, and interactions to become even more contextualized to the situations that executives face.

Personalized feedback-based interventions, such as coaching, can be deployed in "live" settings. They will benefit from the rapidly-proliferating technological capabilities afforded by tracking, polling, sensing, and sampling platforms. They could also be re-designed to undertake psycho-dynamically informed, deep dives into participants' patterns of relating, emoting, communicating, and interpreting. In the process, they will become the equivalent of self-development retreats. And deliver, in a measurable way, self-transformation and self-renewal experiences.

VI. The Effects of Digital Disaggregation, Dis-intermediation, and Decoupling on the Competitive Landscape of Executive Education

The effects of the forces of digitalization — disintermediation, disaggregation, and decoupling — on the executive education industry as well as the mindscapes of payers and participants involve the creation of new ways of satisfying clients' multidimensional preferences as well as new forms of demand and buyer behavior [Narayandas and Moldoveanu, 2016, 1 and 2]. Let us focus on the impact of the three disruptive forces on the cost structures, competitive landscape, and innovation paths of executive education programs.

As executive education, along with higher education, financial services, and healthcare, enters the digital era, the activities, tasks, business models, ways of doing business, and trade-offs in the industry as well as the various modes of learning -- visual, textual, behavioral, online, in-person, group et al -- need to be analyzed afresh to determine the equilibria that are likely to emerge.

Cost Curve Effects: Changing Nature of Communication and Re-Designing the Canon of Learning

Let us start by considering how the infrastructure of teaching materials, methods, instructors, and platforms will affect the production, and thereby, the cost structure, of executive education providers. There are two components of the impact:

First, there will be a quantum reduction in the costs of optimizing instructor-participant interaction. Consider what separates the seeker of a skill from the possessor. It is clearly guidance, content, practice, and feedback. The first two are in the purview of the instructor, the coach, or the faculty member who aggregates, but doesn't produce content. At present, instructors mediate by selecting, curating, and adapting content to participants' needs. The content may be aggregated from many different courses and learning experiences (lectures, quizzes, and so forth) that are designed to mediate the skill-acquisition process.

The emerging personal learning cloud of cases, lectures, modules, platforms, and apps affords education providers distributed access to the content and experience-base of the industry, function, or role for which participants are seeking to develop new skills. It also helps education providers optimize the learning experience across the modules that

catalyze learning. For instance, by using online vehicles, the standard chunking of content delivery to 80-minute classes, each with a 60-minute lecture and 20 minutes of discussion, could be re-designed. They could be modified into a relatively more efficient 20- or 30-minute online lecture, which can be delivered faster by editing out the instructors' classroom idiosyncrasies.

Online lectures will be more effectively because of the rewind - slow-down -speed-up functions that accommodate the adaptation of content delivery to each participant's learning pace as well as the quizzing functions that aid learning at every step. They also come with inverted classroom experiences that afford opportunities to apply the models, methods, and heuristics that the participants have learned to real problems and predicaments.

That's possible because the forces of disaggregation and decoupling work at the level of the instructor too. The availability of a stock of content and experiences, and the means to tailor those experiences to learning outcomes as well as the context of the interactions, enables instructors to slice, dice, and recombine learning experiences to suit both organizations and participants (aka disaggregation). They can also selectively develop those components of a routine that provide high value along a specific dimension of discussion-based interaction (moral deliberation, strategic prospecting, for instance) that was previously embedded in an un-customized set of interactions in case discussions or discussion forums (aka decoupling).

Second, there will be a quantum reduction in search costs to businesses and online providers. The personal learning cloud, enabled by the Web 2.0 environment, affords a quantum reduction in the costs that organizations will incur while searching for content and experiences from education providers. Until now, when a business school used teaching-materials developed by faculty members in other business schools, it entailed large costs, mostly associated with sampling and experimental deployment. In the new environment, though, it will involve no more than disciplined surfing. Both are examples of the combined power of disaggregation and disintermediation, working at the level of the provider

Content that matches pedagogical purposes and learning outcomes can be made available by the personal learning cloud in customized forms. Consequently, a provider can search for the most relevant lectures, discussions, testing materials, and simulations produced by its instructors, whose presence in the classroom is no longer necessary to deliver the content. That shifts the provider's cost curve downward by minimizing the inefficiency of scheduling specific instructors to teach specific content. Most EMBA programs are taught based on the teaching loads of faculty members trained in the basic business disciplines. The availability of an internal stock of courses, cases, tests, and discussion materials enables providers to optimize classroom-resource allocation across instructors. They can choose those with the lowest cost base to deliver the content that has, at least partly, been created by instructors with a higher cost base.

Another implication is that the education provider can optimize content and learning experiences across the range of learning vehicles that other providers have created. For example, an open enrollment program can design learning experiences that involve its instructors delivering content created by other providers. The provider can slice up the value bundles provided by each instructor, and optimize its cost structure and value proposition using the entire stock of teaching and learning materials created by its cadre of instructors. It can replace the instructor by matching content that optimizes learning outcomes with instructors willing to use it.

Value Chain Transformation: Re-constituting the Network of Buyers, Sellers, Aggregators, Intermediators, Payers and Participants

Education providers are not the only, or even the key, decision makers in the executive education business. The decisions that can reconstitute the value chain of executive learning are made by chief executives, chief learning officers, and chief talent officers, whose budgets pay for executive development. The emerging personal learning cloud enables executives and companies, including corporate universities, to optimize learning experiences across content and instructors whose work was previously intermediated by the education providers.

The era of undifferentiated skills taught across contexts, users, industries, and modes of delivery is over. Content, learning experiences, and instructors -- mentors, coaches, faculty members of established business schools -- can be selected and recombined to provide the optimal development experience for an organization's work force. That effect will be particularly pronounced in the case of academics delivering, as free agents, learning experiences to paying organizations. The academics can take advantage of the personal learning cloud to create personalized learning experiences around their core capabilities.

As bargaining power in the market shifts from providers to talent-development organizations, the large-scale aggregators -- such as EdX, Coursera, Harvard Business School Publishing, McKinsey and other large consultancies -- will become marketplaces for content and learning experiences. While content will become commodified, the evolution of learning experiences and content-management technologies into experience design and management will become a critical differentiator. In such an environment, learning-as-an-app, or on-demand learning, will become a capability that enables the traditional content-providers to claim more of the value from transactions in the education market.

In the information technology industry, Microsoft, Apple, Google, and Facebook have created environments incorporating information, knowledge, and analytic-sharing capabilities that enable entire organizations to be on the same page. In the same way, the emerging online learning powerhouses will create executive learning environments that will afford individuals, teams, and groups many opportunities to collaborate, cooperate, and communicate more effectively and efficiently. That will enable companies to turn the individual skill differential of executive learning into the capability differential that characterizes the learning organization.

Innovation Effects: Predicting the Unpredictable

No discussion of a tectonic shift in the landscape of an industry, as we have mapped out, would be complete without considering the imponderables. Those include emerging

organizational forms, models, and modes of executive development that are currently not on the radar screens of buyers, sellers, or even academics.

The personal learning cloud, coupled with machine-learning-enabled predictive algorithms and the potential to measure learners' emotional states and behavioral patterns, portend the emergence of adaptive learning environments. Such environments can exploit the latest learning science -- such as affective state-dependent learning, spaced learning, dialogical learning, and punctuated learning -- to create dedicated learning pods that will impart far more effectively, in a distributed on-demand environment, skills previously thought to require special kinds of classroom-based interaction.

Just as the Web 2.0 ecosystem of online modules, interactives, snapshots of "live" predicaments, and spot quizzes is already taking the place of textbooks, case studies, and exams, so too will a rich set of user-and-content-specific modes of interaction, based on access to learners' state of mind and body, supplant the traditional listen-read-write-speak modes of teacher-based learning. At the same time, those modes will expand the range of skills that can be learned, and increase both the reliability and the distance over which skills can be transferred and applied. The ways in which predictive analytics, personalized networking, and wearable learning will engender these effects can already be spotted.

As the evolution of executive development is driven by the disaggregation and disintermediation of content and learning experiences at greater levels of granularity, it would be logical to examine the building blocks of executive education programs -- lectures, cases, case discussions, simulations, and so on -- and their value to the skill and capability formation dimension [Moldoveanu and Narayandas, 2016] of organizations. With the optimization of learning experiences shifting from education-providers to chief learning officers and their talent-development organizations at one level, and at another level, to coaches, instructors, faculty members, and other learning facilitators, it will be instructive to take a closer look at how skills are developed, acquired, and transferred by the dominant modes of learning. That will be the future focus of our continuing enquiry into executive education.

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