Knowledge and skills transfer between MBA and workplace

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Abstract

Purpose – This paper aims to use goal-setting theory to explain the transfer of knowledge and skills between master of business administration (MBA) and the workplace.

Design/methodology/approach – Data were obtained by an online survey of MBA students enrolled in at four US graduate business schools. These were a public and private institution in the Northeast region, a private sectarian institution in the Midwest region and a private institution in the Pacific region. All students worked while attending the university. The sampling frame consisted of each school's MBA enrollees. Questionnaires were distributed to a random cross-section of part-time students at each graduate school of business representative of returned by 144 students. The profiles of responders were consistent with parameters for the entire MBA student population.

Findings – The research shows that multiple goals of reciprocal knowledge and skills transfer may be in harmony and mutually reinforcing. In principle, each goal is more likely to be attained with greater economy of effort than might be surmised. Additionally, the same forces may act similarly to facilitate attainment of two well-integrated goals, in this case transfer between MBA studies and work, as well as between work and MBA studies.

Research limitations/implications – The present study involved participants from part-time public and private MBA granting institutions in the USA. The study tested and extended goal-setting theory and introduced the innovative concept of reciprocal transfer. Future studies should seek to generalize the findings to a broader population of part-time MBA students, especially from other nations. Despite its strengths, the findings of this study need to be interpreted in the perspective of some limitations. The current study did not measure transfer climates in either the organization or university settings. Transfer climates undoubtedly have an important bearing on transfer outcomes.

Practical implications – Review of the present study suggests that a positive MBA environment is needed to influence motivation to learn and perceptions of the MBA program's utility, thereby promoting transfer of knowledge and skills to MBA studies from the workplace. A supportive work-to-MBA-studies transfer climate will lead to more active learning of course content that has greater relevance for achieving career goals. Potentially generalizable from the organizational transfer climate literature (Rouiller and Goldstein 1990; Rouiller and Goldstein 1993), positive transfer from work to MBA studies will occur when appropriate situational cues and consequences are present in the program.

Social implications – A constructive implication suggested by the findings of this study would be the intervention and transfer management by educators to structure and strengthen the university transfer climate of their part-time MBA programs. Traditionally, the concept of transfer climate has

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been primarily applied to employee workplace training activity and job performance. The university culture of the MBA student might emphasize and reward continuous learning from workplace experiences. Opportunities at the university should be provided for the exercise of newly acquired workplace skills that reinforce MBA learning experiences.

Originality/value – This is the first study that shows how learning goals and performance goals are integrated in the context of a new concept, i.e. reciprocal transfer of knowledge and skills between MBA and workplace settings. It also demonstrates, for the first time, the impact of learning and motivation for MBA studies and perceived utility of MBA program on the extent of transfer of learning and skills from the workplace to the university setting.

Keywords Performance, Knowledge transfer, Management education, Learning orientation

Paper type Research paper

Part-time graduate business education requires from students a protracted and arduous investment while balancing work and studies. This investment in career capital also involves an ongoing individual transfer of training between the two settings. There is a serious dearth of empirical research concerning part-time Masters of Business Administration (MBA) programs and the issue of ongoing transfer of knowledge and skills. The few relevant studies that are available have investigated transfer from MBA to organizations, using accounts of the MBA experience primarily associated with MBA post-graduate workplace experiences and outcomes (Cheng, 2000; Hay, 2006; Legge *et al.*, 2010; Pham *et al.*, 2011a; 2011b, 2012).

The complexity of this topic is compounded by reviewing previous studies of transfer of knowledge and skills between MBA and the workplace that used sampling of diverse populations, including other cultures (UK, Hong Kong, Vietnam and USA), using quantitative, qualitative or conceptual methodologies as well as diverse models and variables from one study to another to explain and measure transfer antecedents and consequences. Moreover, study time frames for interviewing were varied – either coincidental with program studies, at the end of the MBA program, one to five years or up to 15 years after MBA program completion or re-contacted alumni with an unspecified time span since the MBA award. The quality of the MBA programs represented differed from study to study in terms of enrollment selectivity considerations. Substantively, Legge *et al.* featured organizational barriers to transfer, such as individual hidden agendas for self-interest. Pham and associates in their studies emphasized the role of MBA student transfer strategies. Individual characteristics such as self-efficacy, type A personality and work *locus* of control were salient in Cheng's model of transfer. Hay focused on MBA transfer of learning that increases the number of ways business problems may be understood and assists in handling unknown future possibilities. Finally, none of these studies was couched in a theoretical framework that would illuminate, enhance or integrate disparate empirical findings. Clearly, there is a need for the present theory-driven empirical study of working MBA students that addresses learning and performance orientations, and learning motivations, as they affect learning transfer.

Goal orientation is comprised of learning and performance components (Colquitt and Simmering, 1998). Specifically, learning orientation is positively associated with learning motivation. Obversely, performance orientation is negatively associated with learning motivation. The latter was corroborated by a study by Chiaburu and Tekleab (2005), which compared learning-oriented with performance-oriented people. It was found that learning-oriented people were more motivated to learn than was the case for

performance-oriented individuals. However, theorists differ about the fruitfulness of the division between learning orientation and performance orientation as components of goal orientation. This is because learning frequently occurs as a result of task performance – in the absence of formal instruction (Nilsen *et al.*, 2012).

Studies by Bates and Khasawneh (2000) and Ruona *et al.* (2002) marginally linked perceived utility to training transfer. However, perceived training utility was found to be positively associated with reported training transfer (Seyler *et al.*, 1998; Velada *et al.*, 2007).

Theory and hypotheses

Reciprocal transfer of knowledge and skills

The present study breaks important new ground. Previously published research on MBA graduates tests hypotheses that MBA students will transfer unidirectionally their academically absorbed knowledge and skills to advantage at their jobs. Less obvious, and unexplored in past research, is the concept of *reciprocal transfer*, i.e. transferring of an individual's knowledge and skills to and from the MBA studies and current work environments. This is a new and significant development in the fields of workplace learning and business education[1].

For part-time MBA students who are also working, transfer of knowledge and skills should be beneficial not only from MBA studies to workplace competence and recognition, but also from workplace experience and training to the individual learning experience and learning outcomes in their university pursuits. Furthermore, the two facets of transfer will be expected to be mutually influenced. Of course, outcomes of the process will depend on factors such as the structure and quality of MBA programs as well as the nature of incidental and formal training experiences available in employing organizations. In the present study, the explanation of reciprocal transfer is grounded parsimoniously in goal-setting theory, which classifies goals as either learning or performance oriented.

Goal-setting theory is central to the explanation of the reciprocal transfer process. Involvement in goal setting by part-time MBA students, whether self-directed or prescribed, occurs in both the university and workplace. The types of goals involved may or may not be the same, but the goals in each of these settings are visibly and patently integrated, thus motivating the individual's reciprocal transfer of skills and knowledge between settings. That is, goals involving tasks or assignments may be either learning oriented or performance oriented but mutually accommodating. Therefore, attainment of learning or performance goals in the university will be transferable to learning or performance goal attainment in the workplace and vice versa. In any event, the extent of balance between two-way transfer of knowledge and skills will vary by transfer abilities and intent, as well as psychological dispositions of individuals.

Motivation to learn, MBA utility and reciprocal transfer of knowledge and skills

Goal-setting theory offers a compelling explanation of the effects of motivation to learn and perceived utility of the MBA program on the reciprocal transfer of knowledge and skills.

Goal is defined as an aim of action or task that a person consciously desires to achieve or obtain (Locke and Latham, 2002). Goal setting involves a deliberate process to establish a level of performance to attain desired outcomes. When performance does not achieve the desired goal, one becomes motivated to increase effort or change strategy. Dissatisfaction with current performance leads to goal-setting decisions. When the goals that are set are

difficult or challenging, performance levels are raised. For such goals, continuity of commitment is strengthened – a prerequisite for motivation and greater effort to reach goals.

These generalizations are contingent on the premises that the person has the ability to achieve the goal; that goals do not conflict with each other; and are specific rather than general. Successful achievement of goals is aided by feedback mechanisms that monitor goal-seeking outcomes and re-direct strategies, as needed.

Goal setting has been studied as a means of augmenting transfer of training (Baldwin and Ford, 1988; Blume *et al.*, 2010; Brown, 2005; Burke and Hutchins, 2007; Latham and Saari, 1979; Morin and Latham, 2000); Richman-Hirsch, 2001).

Goal orientation is a major determinant of the goal-setting process. Goal orientation is a relatively stable dispositional variable that assumes two forms: development of new skills or meeting normative-based standards (Colquitt and Simmering, 1998). Corresponding to these two forms of goal orientation, there are two types of goals: learning goals and performing goals. Each possesses different characteristics, associated with specific relevant goals. Learning goals are associated with complex tasks that facilitate the acquisition of knowledge and skills. Performance goals, on the other hand, often involve the selection of perfunctory tasks that minimize risks of error and judgment. By voluntary selection of performance tasks which are easy to accomplish, one can project an aura of apparent success (Seijts and Latham, 2005).

Learning goals are generalized in the interest of achieving knowledge in a certain topic or field. However, effort expended toward learning goals may lead to better outcomes of specific performance goals. Alternatively, striving toward performance goals where experience may be abstracted and generalized may facilitate and reinforce achievement of specified learning goals. This is because reflection on actual performance – structured or unstructured– is generative of learning in education, training, preparing for a profession, as well as in the workplace (Nilsen *et al.*, 2012).

Motivation to learn has been defined as trainees' desires to learn the content of a training program. Motivation to learn has been associated with positive learning outcomes in previous research (Baldwin and Ford, 1988; Colquitt and Simmering, 1998; Noe and Schmitt, 1986). The impact of goal orientation on learning motivation is conditional on, among things, perceptions of the outcomes that can be attained by individual progress in a training program. This concept has been referenced as perceived utility in this study. These outcomes include both cognitive and skill-based learning. Goal orientation as a distal personality variable has been integrated with the proximal mechanism of motivation to learn to explain learning outcomes.

In a meta-analysis of 106 published articles on training motivation (Colquitt *et al.*, 2000), motivation to learn was strongly correlated to transfer of knowledge and skills. In their integrative model, they explained that motivation to learn leads to other learning outcomes, such as declarative knowledge and skill acquisition. In turn, these learning outcomes affect transfer levels from training programs to job settings. Another meta-analysis (Alliger *et al.*, 1997) investigated the effects of utility judgments, i.e. the extent to which the training was expected to influence job performance. Evidence from 34 studies indicated that training utility assessments correlated with immediate and retained learning, as well as transfer of knowledge and skills to the job. The interpretation given is that one might assume that knowledge of the work environment and specific situational constraints faced affect trainees' utility reactions. The role of motivation to learn for transfer of training has been theoretically and empirically

examined in another study (Gegenfurtner and Vauras, 2012). It was concluded that motivation to learn is associated with meaningful cognitive engagement in training content, arousing situational interest and learning involvement. Therefore, it figures in a central way in transfer of training.

More pointedly, perceived transfer of knowledge and skills from MBA studies to the workplace among MBA graduates has been linked with recollections of past MBA experiences, i.e. motivation to learn and perceived utility of MBA program content (Cheng, 2000). MBA learning motivation leads one to seek workplace experience with newly acquired knowledge and skills. This is expected especially in the case when high value, or utility, is associated with their MBA studies. Another analysis of MBA graduates transfer of skills and knowledge found that attitudes on training value were significantly and positively associated with transfer outcomes (Cheng and Ho, 1998). It was concluded that managers will induce behavioral change on their jobs when training is perceived as useful.

Perceived utility of training is affected by the transfer climate, whether in the workplace or in the university context. Transfer climate refers to characteristics of the specified environment that inhibit or facilitate task performance transfer from one venue to another (Kopelman *et al.*, 1990).

Transfer of training has been defined as the productive use of the newly learned content of a training program (De Corte, 2003). No research to date has examined or measured the effects of both transfer of knowledge and skills acquisition to the performance venue and transfer of experiential learning to the MBA condition. In the present study, variables previously discussed may be expected to positively affect *reciprocal transfer of knowledge and skills* – MBA transfer to workplace setting and workplace experience to MBA studies. This is because, theoretically, these two components of reciprocal transfer are strongly interdependent and are driven by the same processes. That is, knowledge and skills are not in watertight compartments but reside in the person. The expression of cognitive and behavioral learning may express itself wherever it is useful. Therefore:

H1. Perceived utility of the part-time MBA program and learning motivation positively predispose transfer of knowledge and skills between MBA studies and ongoing job experiences.

H2. Perceived utility of the part-time MBA program and learning motivation positively predispose transfer of knowledge and skills between ongoing job experiences and MBA studies.

Transfer of knowledge and skills, and job performance competence

Goal-setting theory also offers a cogent frame of reference for the effects of transfer of knowledge and skills on competence. In workplace settings, commitment to assigned or self-directed goals motivates task-specific plans that use transferable knowledge and skills for competent goal attainment.

A model of the relationship of goals, plans and performance has been developed that describes what happens after goal commitment. (Locke and Latham, 1990). The model explains that for complex goal setting, individuals activate either a stored or new task-specific plan. Goal complexity is based on the number of distinct acts and information cues; the nature of relationships between task inputs and task products; and changes in the acts and information cues for a task.

Development and execution of a plan for a complex goal will more generally rely on task-relevant knowledge and heuristic rules that apply to the task domain. The building block of a stored task-specific plan repertoire includes a set of expectations about the relationships between acts, events, objects, situations and task outcomes (Locke and Latham, 1990). These expectations are based, in large measure, on transfer process learning from a variety of settings involving relevant past experience, instruction, training and informal knowledge acquisition.

In the event that a new complex task is encountered, planning will require additional study, research and creative problem solving. This not only builds on past learning obtained from transfer but also enhances the motivation for ongoing receipt of transfer of knowledge and skills from a variety of sources. The amount of effective transfer receipt will determine cognitive skill resources and affect task performance outcomes. Finally, feedback during and after task performance will fine-tune and calibrate the use of knowledge and skills acquired by transfer processes.

Details of plans to solve business problems depend on applied knowledge and skills. Business skills and learning may be classified as hard skills, e.g. management techniques such as statistical analysis and operations management. Alternatively, they may be classified as soft skills, e.g. modes of self-management or supervision of others in the workplace (Sturges *et al.*, 2003). Transfer of such skills and learning between MBA studies and organizational settings are enabled by generic competencies, including teamwork, oral and written skills, leadership styles, adaptability, dependability, innovativeness, resourcefulness, etc. (Quek, 2005). Transfer of knowledge and skills between settings has demonstrated in a study that described superior knowledge and skills of MBA graduates, as compared with that of non-MBA graduates, using matched samples from several organizations (Baruch and Peiperl, 2000). Therefore:

H3. Transfer of knowledge and skills between MBA studies and ongoing job experiences and transfer of knowledge and skills between ongoing job experiences and MBA studies positively predispose self-assessed job competence.

Methods

Sample

Data were obtained by an online survey of MBA students enrolled in at four US graduate business schools. These were a public and private institution in the Northeast region, a private sectarian institution in the Midwest region and a private institution in the Pacific region. All students worked while attending the university. The sampling frame consisted of each school's MBA enrollees. Questionnaires were distributed to a random cross-section of part-time students at each graduate school of business representative of returned by 144 students. The profiles of responders were consistent with parameters for the entire MBA student population at each university.

The study exhibited strong internal validity, with sensible and statistically significant (as well as theoretically sound) interconnections between all measures. The statistical model used, partial least squares, traced the impact of each measure on transfer of learning while controlling for the confounding effects of a large number of other measures. Workplace learning measurement was based on an extremely varied sample of student outside jobs from different fields, differing levels of responsibility and represented a wide variety of industries. All of the foregoing strongly argues in support of the generalizability of study findings.

Measures

The transfer of knowledge and skill variables, as well as selected antecedent and outcome variables, were measured by way of a Web-based MBA student survey. To select the measures used, we conducted a review of the literature and open interviews with ten MBA students, who were asked to recall and evaluate their experiences in the MBA program and at work, as well as the apparent associations between experiences across both of these settings. They were also encouraged to provide concrete examples of their experiences and inferences. Based on these interviews and the preliminary review of the literature, a questionnaire was developed containing scale items used in this study (see Appendix 1). Each item was marked – 1 for strongly disagree, 2 for disagree, 3 for neither disagree nor agree, 4 for agree and 5 for strongly agree.

The MBA utility scale is designed to measure perceptions of the training value of the MBA program. The original four-item scale was developed expressly to use in a study of training transfer among MBA graduates (Cheng, 2000), as was the Learning Motivation scale. The latter scale measures the trainee's desire to learn program content. The scale for Perceived Knowledge and skills transfer was used to gauge perceptions of skills and competencies from MBA studies to the workplace. The five-item Perceived Knowledge and Skills Transfer scale was based on the work of Facteau *et al.* (1995). The original scale was used to assess training transfer for internal organization programs and was based on a review of the literature. The Competence scale used in the present study was a sub-scale labeled job competence from an index of organizational assimilation. Job competence was defined as a self-rated assessment of the effectiveness of one's overall job performance (Myers and Oetzel, 2003).

All scales selected for the current study had been used in previous published works with the exception of the scale for transfer of knowledge and skills from work setting to MBA studies. However, this scale was constructed as a meticulous mirror image of a previously published scale on transfer of knowledge and skills from MBA studies to the work setting and, therefore, had logically and conceptually convincing face validity. Profiles of responders and scale measures are shown in Tables I and II.

Analysis

Partial least square regression was used for the fit of component structures between motivation and utility, and each of the transfer of knowledge and skills scales – from MBA studies to the job setting and from the job setting to MBA studies. Component structures are shown in Tables III. The rationale behind the chosen mode of analysis involves selection of a statistical model that efficiently and reliably disentangles complex interrelationships between large sets of variables collected from sparse numbers of observations (Tables IV and V). This is a multivariate technique that can be interpreted as a principal components analysis, modified to maximize explained variance in a response variable or variables, combined with the use of latent variable scores in a regression analysis. Special advantages of the technique for the present study are that it is not impeded by collinearity among variables, allows for small sample sizes and may use multiple independent and dependent variables (Abdi, 2007; Haenlein and Kaplan, 2004; Tobias and Seara, 2006). Partial least squares analyses used Statgraphics Centurion XV software released by StatpointTechnologies.

The program uses non-linear iterative partial least squares (NIPALS) algorithm to extract the components after first transforming each variable so that it has a mean equal

Scale	Source	Example item
Perceived utility	Cheng (2000)	The MBA program provides me with cases and experience that closely resemble those in the actual work environment
Learning motivation	Cheng (2000)	I try to learn as much as I can from my MBA courses
Transfer to sob setting	Facteau *et al.* (1995); Tesluk *et al.* (1995)	I am able to transfer the skills learned in my MBA courses back to my actual job
Transfer to MBA studies	Adapted from transfer to job setting scale	I am able to transfer the skills learned on the job back to my MBA studies
Job competence	Myers and Oetzel (2003)	I think I am an expert at what I do at work

Table I.
Scale measures used in the study

to zero and a standard deviation equal to one. Non-normality of the distribution of random error is often accompanied by heteroscedasticity. Both of these issues are rectified by applying variance-stabilizing transformations present in the NIPALS algorithm. Additionally, a check of the relative frequency distribution for the residuals confirmed that the conclusions from the statistical analysis are supported by theory.

Results

Descriptive results

H1: Antecedents of knowledge and skills transfer between MBA studies. H1 states that perceived utility and learning motivation will positively predispose transfer of knowledge and skills between MBA studies. To test this hypothesis, we conducted an analysis of variance from a partial least squares model (Tables VI and VII).

The effect of perceived utility and learning motivation on transfer between MBA studies to the job is significant ($F = 42.63$, df $= 1$, $p < 0.01$). Partial least squares standardized regression coefficients for utility (0.39) and motivation (0.34) are both positive and are about the same. Standard errors, t-statistics and p-values are 0.10, 5.27 and $p < 0.01$ for utility, and 0.09, 4.66 and $p > 0.01$ for motivation. The results support *H1*.

H2: Antecedents of Knowledge and Skills Transfer between job settings and MBA studies. H2 states that perceived utility and learning motivation will positively predispose transfer of knowledge and skills between ongoing job experiences and MBA studies. To test this hypothesis, we conducted an analysis of variance from a partial least squares model.

The effect of perceived utility and learning motivation on transfer between the job and MBA studies is significant ($F = 42.63$, Df $= 1$ $p < 0.01$). Partial least squares standardized regression coefficients for utility (0.37) and motivation (0.23) are both positive, and utility has the stronger impact in this case. Standard errors, t-statistics and p-values are 0.10, 4.62 and $p < 0.01$ for utility, and 0.10, 2.93 and $p > 0.01$ for motivation. The results support *H2*.

H3: Consequence of RT knowledge and skills transfer between MBA studies and ongoing job experience as well as between ongoing job experience and MBA studies for job competence. H3 states that the transfer of skills and knowledge in both directions

Item	Total (%)	Males (%)	Females (%)
Age			
21-25	27	22	33
26-30	38	45	33
31-35	16	16	15
36-40	7	6	9
41-45	6	5	7
46-50	2	1	3
Over 50	4	5	–
Marital status			
Single	62	61	63
Married	35	36	35
Other	3	3	2
Undergraduated degree			
Business	52	55	50
Liberal arts	14	11	16
Engineering	9	12	5
Other	25	22	29
Years employed at current job			
Up to 1 Year	17	17	19
1 to 2 years	47	51	40
2 to 3 years	25	20	32
3 to 4 years	6	6	6
5 or more years	5	6	3
Annual salary			
Under 20 k	10	9	10
20 to 40 k	18	15	24
40 to 60 k	32	30	34
60 to 80 k	17	13	22
80 to 100 k	9	10	8
Over 100 k	14	23	2
Base	(144)	(81)	(63)

Table II.
Descriptive statistics

	Variables	
Models	Independent	Dependent
Model 1	Achievement motivation	Learning motivation Perceived utility
Model 2	Learning motivation Perceived utility	Transfer to job Transfer to MBA
Model 3	Transfer to job Transfer to MBA	Job competence

Table III.
Knowledge and skills transfer models and variables

will positively predispose job competence. That is, the greater the amount of MBA transfer to the job together with the greater amount of job transfer to MBA studies, the stronger the reported competence level on the job. To test this hypothesis, we conducted an analysis of variance from a partial least squares model (Table VIII).

The effect on job competence of two-way transfer between the job and MBA studies is significant [$F = 20.15$, Df $= 1$] $p < 0.01$. In Table IX, partial least squares standardized regression coefficients for transfer to the job (0.23) and transfer to the MBA (0.16) are both positive. Standard errors, t-statistics and p-values are 0.09, 3.27 and $p < 0.01$ for transfer to the job, and 0.10, 0.44, and $p < 0.05$ for transfer to the MBA. The results support *H3*.

Discussion

A primary purpose of marketing education is to promote mastery of business knowledge and skills and, in the process, prepare students to perform their jobs effectively. Superior job performance relies on the transferability of MBA-imparted knowledge (Ramocki, 2012). The present study addressed the premise but broadened it

Table IV.
Summary statistics for the study sample

Variable	Mean	SD	Coefficient of variation
Transfer to MBA studies	13.90	2.88	20.74
Transfer to job setting	13.88	3.13	22.58
Utility	11.65	2.21	18.97
Motivation	12.86	2.33	18.10
Competence	15.33	2.71	17.69

Note: $N = 144$

Table V.
Correlations of study variables

Variable	1	2	3	4	5
1. Utility	–	0.42	0.47	0.53	0.38
2. Learning motivation			0.39	0.50	0.35
3. Transfer to MBA studies				0.64	0.26
4. Transfer to workplace					0.36
5. Competence					–

Note: All correlations are statistically significant at $p < 0.01$

Table VI.
Analyses of variance from partial least squares model for the effect of perceived utility and learning motivation on transfer of knowledge and skills between MBA studies and job setting

Source	Sum of squares	df	Mean square	F-ratio	p-value
Transfer of knowledge and skills from MBA studies to job					
Model	528.92	2	264.47		
Residual	874.82	141	6.20	42.63	0.00
Total (corr.)	1403.75	143			
Transfer of knowledge and skills from job to MBA studies					
Model	312.30	2	156.15		
Residual	876.34	141	6.22	25.12	0.00
Total (corr.)	1188.64	143			

through the understanding of reciprocal transferability of knowledge between academia and the workplace. Results support goal-setting theory (Latham and Locke, 2002).

Goal-setting theory hinges on estimates of the feasibility of goal attainment. Goals must be realistic. Hence, the overall goals of effective practical application of business knowledge and skills and achievement of strong academic performance in the MBA program depend on both the levels of learning and the value of the program content. In the present study, as expected, relationships were found between motivation to learn and program utility, on one hand, and reciprocal transfer of knowledge and skills between the two domains of university and work. These serendipitous findings contribute to the goal-setting theoretical framework. Understanding of the bases of motivation to learn and of MBA program perceived utility provides additional insights into goal-setting theory framework for reciprocal transfer.

Motivation to learn is determined by individual characteristics, career and job attitudes as well as situational factors (Cheng, 2000). Thus, individuals who possess

Table VII.
Regression coefficients from partial least squares model for the effect of perceived utility and learning motivation on transfer of knowledge and skills between MBA studies and job setting

Variable	Transfer from MBA to job	Transfer from job to MBA
Standardized regression coefficients		
Constant	0.00	0.00
Utility	0.39	0.37
Motivation	0.34	0.23
Standardized regression coefficients		
Constant	1.58	4.58
Utility	0.55	0.48
Motivation	0.46	0.29

Table VIII.
Analyses of variance from partial least squares model for the effect of transfer of knowledge and skills between MBA studies and job setting on competence

Source	Sum of squares	Df	Mean square	*F*-ratio	*p*-value
Competence					
Model	130.75	1	130.75	20.15	0.00
Residual	921.26	142	6.49		
Total (corr.)	1052.00	143			

Table IX.
Regression coefficients from partial least squares model for the effect of transfer of knowledge and skills between MBA studies and job setting on competence

Variable	Competence
Standardized regression coefficients	
Constant	0.00
Transfer to Job	0.23
Transfer to MBA	0.16
Unstandardized regression coefficients	
Constant	10.50
Transfer to Job	0.20
Transfer to MBA	0.15

traits such as high self-efficacy images, work *locus* of control and type A personalities will have stronger motivations to learn. Further, job involvement, organizational commitment and career commitment will also fuel learning motivations. Finally, higher levels of motivation to learn will also depend on an appropriate workplace culture, transfer climate and reward systems.

Utility of the MBA course refers to the belief that MBA studies are an effective means to goal attainment. Reference goals may be global or specific, workplace or education setting-related and proximate or future-oriented. Utility of the MBA course may be individually assessed by improvements in workplace outcomes such as performance of difficult tasks, creating innovative solutions to new tasks, experienced gains in efficiency and better coordination in inter-functional tasks. Alternatively, utility of the MBA course may be assessed by MBA-related outcomes resulting from a learning environment at the university which favors enrichment from workplace learning and experience. This would facilitate greater interaction and participation in classroom work, development of papers based on workplace experience, greater understanding of group processes and projects, and preparedness to assimilate concepts that are universally understood in business.

The research shows that multiple goals of reciprocal knowledge and skills transfer may be in harmony and mutually reinforcing. In principle, each goal is more likely to be attained with greater economy of effort than might be surmised. Additionally, the same forces may act similarly to facilitate attainment of two well-integrated goals, in this case transfer between MBA studies and work as well as between work and MBA studies.

In a previous study, transfer of MBA knowledge and skills was more strongly affected by utility of the MBA course than by motivation to learn (Cheng, 2000). The present study, in contradistinction, found that the same two forces were factors in transfer, but their effects on MBA to work transfer were relatively equal. Beyond that, this broke entirely new ground unexplored in previous studies in the discovery that the same two factors of motivation and utility were relatively equal in their influence on transfer from the job to MBA studies, but at lower levels of prediction than was found for the mirror image transfer.

Of additional interest is the individual goal of increased competence in the workplace setting as an outcome of reciprocal transfer. This study finds that the transfer process between the two domains does, in fact, strongly affect competence. Transfer of knowledge and skills for work to MBA has a stronger effect on competence than it does from MBA to work. This insight points to new directions in goal-setting theory. It suggests that performance goals may be better achieved when they are also instrumental for the achievement of learning goals.

Implications for management education

The present study has been conducted among a sample of MBA students from four universities with distinctive missions and structures. Therefore, although statistical tolerance estimates are acceptable, caution should be exercised in generalizing to applications to management education settings of all varieties. That being said, a constructive implication suggested by the findings of this study would be the intervention and transfer management by educators to structure and strengthen the university transfer climate of their part-time MBA programs. Traditionally, the concept of transfer climate has been primarily applied to employee workplace training activity and job performance. The university culture of the MBA student might emphasize and reward continuous learning from workplace experiences. Opportunities at the

university should be provided for the exercise of newly acquired workplace skills that reinforce MBA learning experiences.

However, the transfer climate in the workplace for working part-time students taking the MBA program is important as well. This climate may facilitate productive transfer of MBA learning of knowledge and skills acquired to the job context. Additionally, the workplace transfer climate for part-time MBA-enrolled employees may be positively adjusted by supervisors who structure an appropriate job enrichment and rewards system.

Review of the present study suggests that a positive MBA environment is needed to influence motivation to learn and perceptions of the MBA program's utility, thereby promoting transfer of knowledge and skills to MBA studies from the workplace. A supportive work-to-MBA-studies transfer climate will lead to more active learning of course content that has greater relevance for achieving career goals. Potentially generalizable from the organizational transfer climate literature (Rouiller and Goldstein, 1990, 1993), positive transfer from work to MBA studies will occur when appropriate situational cues and consequences are present in the program.

Examples of situation cues might be the re-design of the curriculum to include courses that provide greater latitude for students to introduce concepts and skills acquired in the workplace. As for consequences that are transfer supportive factors, MBA students might be accorded higher grades for infusing workplace knowledge and skills into their papers and case analyses. MBA educators might seek to find further ways to improve the transfer climate within their institutions. To the extent of which they are successful, their MBA students should greatly benefit by improving their academic performances and career capital through the transfer process enhancement of learning.

Limitations and future research

The present study involved participants from part-time public and private MBA granting institutions in the USA. The study tested and extended goal-setting theory and introduced the innovative concept of reciprocal transfer. Future studies should seek to generalize the findings to a broader population of part-time MBA students, especially from other nations. Despite its strengths, the findings of this study need to be interpreted in the perspective of some limitations. The current study did not measure transfer climates in either the organization or university settings. Transfer climates undoubtedly have an important bearing on transfer outcomes.

Future research should take note of individual characteristics of transfer carriers between the part-time MBA studies and the work environment. For example, transfer of learning and skills are likely to be affected by variations in achievement motivation. Generally, in principle, this trait will be related to motivation to learn in the MBA program, motivation to excel in work performance as well as to succeed in business career outcomes. Ideally, psychological traits such as achievement motivation should be measured at an earlier stage of a longitudinal study to more rigorously test causal models. Also, the present study did not take into account in-company training experiences which can moderate observed relationships and deepen understanding.

Beyond its limitations, this study has opened up new research vistas. These include studies that focus on reciprocal transfer of learning and skills, interrelation of different transfer dimensions, the impact of reciprocal transfer and transfer climate in the MBA context. Such studies promise positive consequences for management education and practice.

Note

1. An interesting article by Latham (2001) used the same term reciprocal transfer of learning, but with a distinct meaning from its usage in this paper. To re-specify the concept, Latham's article was based on the author's travels in the areas of employee motivation, performance appraisal and personnel selection. His description of the concept involved learning dissemination to and from consulting practice and professional journals. This citation appears to be the sole reference to reciprocal transfer of learning in the literature.

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Appendix

Positions of MBA respondents

- Accountant
- Analyst
- Architectural designer
- Corporate claims manager
- Certified public accountant
- Community development coordinator
- Consultant
- Executive editor
- Finance information system specialist
- Financial underwriter
- Graduate assistant to the space director
- Intern
- Legal assistant
- Locomotive engineer
- Medical assistant
- Office assistant
- Office manager
- Product development assistant
- Project production planner

- Research assistant
- Residence hall director
- Retail account specialist
- SR regional control center representative
- Sales
- Senior specialist, regulatory affairs
- Six sigma process improvement consultant
- Stock boy at target
- Ultrasound technologist
- Unit director
- Academic advisor
- Account II
- Account assistant
- Account coordinator
- Account executive
- Accountant
- Accounts payable
- Admin assist 3
- Analyst
- Application dev
- Associate
- Bank manager
- Banking
- Business analyst
- Business developer
- Buyer
- Chief engineer
- Clerk
- Client services
- Compliance analyst
- Computer programmer
- *Controller*
- Coordinator
- Design
- Developer
- Eng
- Evp
- Financial analyst
- Financial management
- Financial rep

- Front desk supervisor
- Functional consultant
- Graduate assistant
- Instructor
- Manager
- Market research analyst
- Marketing analyst
- Media
- Merchandiser
- Market coordinator
- Owner
- Owner/operator
- Product developer
- Product specialist
- Project manager
- Purchasing manager
- Regional sales manager
- Research assistant
- Research associate
- Sales
- Sales manager
- Self-employed
- Senior business analyst
- Specialist
- Senior account manager
- Supply chain manager
- Tax analyst
- Teller supervisor
- Treasure
- Treasurer
- Television producer
- Underwriter

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