A Review of Literature on Training Transfer Motivation and Psychological Capital

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ABSTRACT

As training and development, along with continuous learning has become an important aspect of work, the effectiveness of the transfer of knowledge, skills and behaviours to the workplace have been called into question. A meta-analysis of training transfer has called to move beyond contextual constraints to evaluate the psychological traits and states that impact training transfer motivation. The recent field of positive organisational behaviour, specifically the positive higher order state, Psychological Capital, is reviewed in relation to its potential to meet calls to evaluate psychological traits and states in relation to training transfer motivation. Research questions are posed for future research incorporating pre-training motivation and trainee’s positive psychological states, through Psychological Capital.

Keywords: transfer of training / learning, skills development / training, human capital, individual development.
Continuous learning, dynamic work places and enhanced learning organisations are key features of the future work place. Following the theme of the future of work, this paper reviews literature on training motivation and training transfer. Trainees who show high positive affect also show high motivation to apply their learning from training to improve work performance (Naquin & Holton 2002). Due to the significance of pre-training positive affect on training transfer, the application of the higher order positive psychology concept, Psychological Capital (PsyCap), is considered as an antecedent to improved training motivation leading to higher levels of training transfer. As organisational training is recognised as an important aspect of competitive advantage, researchers have developed theoretical frameworks to improve the overall quality of training and effective training transfer (Holton, Coco, Lowe & Dutsch 2006). Much of the research on training effectiveness has been based on contextual constraints, including: organisational climate; employee perceptions of training (Klein, Noe & Chongwei 2006); and attitudinal variables (Gist, Stevens & Bevetta 1991). Training motivation is considered basic to training transfer (Pugh and Bergin 2006). One relatively recent higher order concept not addressed directly in training transfer motivation research is the individual’s positive psychological state, PsyCap.

Despite calls to develop positive psychological states to enhance training development and effectiveness (Combs, Luthans, & Griffith 2009), there has been little research in relation to training transfer motivation. The purpose of this paper is to take an initial step in addressing this deficit with an overview of literature on training transfer motivation and positive organisational behaviour. The paper contributes to a discussion of future workplaces by suggesting questions for empirical research to test the efficacy of PsyCap in understanding training transfer motivation. The paper begins with a summary of the importance of training and development followed by discussions of training motivation and its measurements. Focus is then given to positive organisational behaviour and the development of PsyCap, including its measurement and critiques. The final section reviews previous research connecting training motivation with PsyCap and concludes with suggestions for research arising from the review of these two areas of literature.
TRAINING AND DEVELOPMENT

Training and development are central roles in human resources and organisational development functions as witnessed by the increasing number of Learning and Development units being established within Human Resources departments. Training is identified as a competitive advantage to overcome organisational challenges including globalisation, high quality customer service, managing interpersonal communications, and technology integration (Noe, Hollenbeck, Gerhart & Wright 1994). Employees able to display congruency that aligns the ability to utilise communicative skills, coupled with subject matter expertise in response to opportunities and problem solving, add value to their organisations (Quinn, Anderson & Finkelstein 1996). To gain and maintain competitive advantage, companies are advised to develop training beyond conventional technical and skills based training to incorporate psychological and communication abilities to add value (Prager 2003). Due to this recognition, the size of organisational spend on employee training and development in the United States alone is in the vicinity of USD125 billion annually (Paradise 2007). In the Australian context, recent research has put the figure of overall adult training at AUD30 billion (Trendel & Siu 2005), which incorporates AUD16 billion of direct organisational expenditure (Richardson 2004). Given the extent of investment in training and development, it is pertinent to question the extent that training is transferred back to the workplace as an increase in knowledge, skills and behavioural change and to find ways to increase the transfer.

Despite the large investment by organisations into training and development, training transfer effectiveness remains in contention. Definitions of training transfer highlight how trained knowledge and skills are used in the job context for which the training was designed and to be maintained over a period of time (Baldwin & Ford 1988). The measure of effective organisational training is its positive transfer to the workplace, however research results question the extent of training transfer (Tannenbaum & Yukl 1992). The lowest levels of reported results in training effectiveness studies range from as little as five percent of participants applying training to the workplace (Brinkerhoff & Gill 1994) to 10 percent of training resulting in behavioural change (Georgeson 1982). Longitudinal studies found 60 percent of participants demonstrate immediate training transfer but this dissipates to only 30 percent maintaining the skills transfer after one year (Saks 2002). Companies may increase
their spend on corporate training, but Kontoghiorghes (2001) asks whether spend correlates with training transfer. That is, the extent to which the knowledge and skills gained during training are applied in the workplace and in other areas of an employee’s life. As elements of training effectiveness, skills transfer, employee performance improvement, employee well being and training investment returns are highly relevant theoretical and practical issues (Burke & Hutchins 2007; Bates, Holton, Seyler & Carvalho 2000).

**TRAINING MOTIVATION**

One of the important factors identified as having a positive impact on training transfer is training motivation (Blume, Ford, Baldwin & Huang 2010; Pugh & Bergin 2006). Trainees who are high in positive affectivity are also higher in motivation to improve their work performance through learning because they have a sense of steadiness and are able to focus on training tasks, free of other mental distractions (Naquin & Holton 2002). However, training motivation is a complex issue with multiple antecedents, correlates and consequences. In developing an integrative framework, Gegenfurtner, Veermans, Festner and Gruber (2009) identify seven areas of contributions to research affecting motivation to transfer training (see Figure 1): individual pre-training motivation (attitudes toward training, motivation to learn, personality traits, work commitment); individual post training motivation (self efficacy, expectancies, training reactions); training related (pre-training framing); intervention design; organisational culture; post training organizational factors (job characteristics; social support); and the overall link between motivation to transfer training and transfer of training. Given the breadth of research in training motivation, this paper focuses on the first contribution, that of individual pre-training training motivation.

Training motivation is the persistence or intensity of effort that training participants apply to learning oriented improvements throughout the whole training process, including pre and post training (Tannenbaum & Yukl 1992). Since Noe (1986) introduced ‘motivation to transfer’ as a construct, training effectiveness has shown to be influenced by pre-training motivation to learn. Further studies demonstrate the importance of the pre-training context, for example, trainees’ individual characteristics have a greater influence on training transfer than training design effects (Baldwin,

The importance of motivation in training effectiveness was highlighted by Quinones (1995) in finding that pre-training needs and trainee attribution determine the extent to which pre-training characteristics affect training outcomes. Quinones (1995) developed a model to show how framing training assignments provides feedback that results in higher pre-training training motivation. This study is supported by Chiabura and Marinova (2005) who measured the positive impact pre-training motivation has on training transfer for preset outcomes by examining the relationship between two individual dimensions, goal orientation and training self-efficacy, and two contextual factors, supervisor and peer support. The results of structural equation modelling found a positive correlation of 0.24 between the pre-training motivation and skills transfer. The study found a strong positive correlation between mastery approach, goal orientation (0.66) and to a lesser extent between training self-efficacy (0.34) and pre-training motivation. When considering the contextual factors, peer support predicted both pre-training motivation (0.11) and skill transfer (0.65), whereas supervisor support was unrelated to pre-training motivation (0.04) and correlated negatively with skill transfer (-0.10). Because of its focus on goal orientation and self-efficacy, Chiabura and Marinova’s (2005) research relates to the study of PsyCap and pre-training motivation as both these individual constructs are part of the PsyCap higher order construct. Various studies have found positive correlation coefficients of between .33 and .75 in predictions of training transfer based on pre-training motivation (Bell & Ford 2007; Chiaburu & Lindsay 2008; Noe & Wilk 1993; Rowold 2007).

**Measuring Training Motivation**

Various instruments with different foci have been developed to measure training motivation. The most common instrument used to assess transfer motivation is Noe and Schmitt’s (1986) 14 item scale that has an internal consistency reliability estimate of .68. This instrument uses questions such as: “Before I attend training programs I usually consider how I will use the content of the program”. Intention to apply knowledge, skills and behaviours learnt during training to the work place is
commonly measured by Noe and Wilks’ (1993) 17 item instrument. This instrument includes items to assess motivation to learn in development activities such as: “I try to learn as much as I can from training programs” and it has an internal consistency reliability estimate of .81. Using these measures as a base, an array of variables have been assessed to determine individual traits affecting pre-training motivation. A meta-analysis of training transfer by Burke and Hutchins (2007) outlines a range of learner characteristics and highlights the lack of empirical research in relation to ‘motivation to learn’ and ‘motivation to transfer’ (a summary of the meta-analysis is contained in Figure 2). Burke and Hutchins (2007) conclude their meta-analysis with three areas requiring further research: individual profiles that pose barriers to transfer; development strategies to overcome these barriers; and transfer interventions required for trainees with problematic profiles. The following section reviews literature in relation to the developing area of positive organisational behaviour and in particular PsyCap as a possible means to address the questions posed by Burke and Hutchins (2007).

### POSITIVE ORGANISATIONAL BEHAVIOUR

The developing area of Positive Organisational Behaviour (POB) has taken the concepts of positive psychology and applied them to organisational development. POB was introduced as the “study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans 2002b:59). The recognition of the effectiveness of positivity in the workplace is not a new concept. Since the Behaviourist movement in management theory in the 1930s and 1940s there has been a positive humanistic approach in theory, research and practice. These include: the Hawthorne effect identifying a link between employees feeling positive and their performance (Henderson 2002); Maslow’s study of motivation and the first use of ‘Positive Psychology’ (McShane & Travaglione 2003); and McGregor’s findings on enjoyable work (Clegg, Kornberger and Pitsis 2008).

A distinctive feature of POB is that it categorizes previous research through an organising framework for current and future research on positive states (Roberts 2006). Viewed as a paradigm shift, POB applies positive constructs to the organisational behaviour field for theory building and research (Luthans, Youssef & Avolio 2007). There are three specific inclusion criteria for POB. First,
constructs are based on theory, research and valid measurement. Second, the constructs must be state-like, as opposed to the more fixed trait-like or behavioural, and thus open to development. Finally, the constructs must have performance impact (Luthans 2002a). Using these criteria, the higher order construct of Psychological Capital (PsyCap) was developed to include states that had previously been used in positive psychology but not used in organisational behaviour. These include self-efficacy, optimism, hope and resilience (Luthans, Youssef & Avolio 2007).

PSYCHOLOGICAL CAPITAL

Psychological Capital is a higher order construct that represents “individual motivational propensities that accrue through positive psychological constructs” (Luthans et al. 2007: 542). Although in general English use there may be overlap in the use of the four terms: hope, optimism, resilience and self-efficacy, in Positive Psychology they hold separate distinctive attributes. Definitions of each of these constructs are as follows. First, is the construct of hope defined by Snyder et al. (1996: 287) as a “positive motivational state that is based on an interactively derived sense of successful (a) agency (goal directed energy) and (b) pathways (planning to meet goals).” Hope consists of three major conceptual foundations: agency, pathways and goals. The agency component of hope can be thought of as having the will to accomplish the intended or desired effect (Snyder 2000, 2002). The second construct that constitutes PsyCap is optimism, defined by Seligman (1998) as a cognitive process involving positive outcome expectancies and causal attributions that are external, temporary and specific in interpreting bad or negative events and internal, stable and global for good or positive events. The third construct is resilience, characterised by positive coping and adaptation in the face of significant risk or adversity (Masten 2001; Masten and Reed 2002). Resilience theory and research are largely drawn from clinical psychology work with adolescent children that have succeeded despite great adversity (Werner and Smith 1992). The final construct in PsyCap is self-efficacy. Bandura (1997) describes four key sources of self-efficacy: enactive mastery (success experiences); vicarious learning (modelling); verbal persuasion (coaching and encouragement); and managing physiological states (reducing the emotional threat of failures).
Measuring PsyCap

For the personality traits of PsyCap to be applied to pre-training motivation, a 24 item Psychological Capital Questionnaire (PCQ) was developed by Luthans, Avolio, Avey and Norman (2007). The criteria used by Luthans et al. (2007) to select the appropriate constructs include: being grounded in theory and research; achieving valid measurement, being state like and hence open to development and change as opposed to a fixed trait; and finally, having a positive impact on work related aspects (Luthans 2002a). Using these criteria, the composite concept of PsyCap was constructed as “an individual’s positive psychological state of development and is characterised by self efficacy, optimism, hope and resilience” (Luthans 2002a: 3). PsyCap as a unit of analysis is focused at the individual level of personality traits as opposed to group or organisational levels of collective organisational psychology.

PsyCap has been confirmed as a higher order construct within several studies (Peterson 2006; Bakker & Schaufeli 2008; Luthans 2010). For this to occur each of the four positive constructs need to be shown to have conceptual independence (Bandura 1997; Snyder 2002). Each of the components has demonstrated discriminant validity across various samples when compared with each other (Bryant & Cvengros 2004; Carifio & Rhodes 2002; Youssef & Luthans 2007). There is an underlying link that runs between them to form the higher order construct namely, a shared contribution to a motivational propensity to accomplish tasks or goals. Even though there is discriminant validity, there also exists a unique theoretical and measurable higher order core construct of PsyCap, that is “one’s positive appraisal of circumstances and probability for success based on motivated effort and perseverance” (Luthans et al. 2007: 550). The four constructs were selected based on face and content validity being temporal and state like. From Luthans et al.’s (2007) study, the reliability of the overall PsyCap measure in all four samples was consistently above this standard. Similarly, the Cronbach alphas were over .77 for the four individual constructs in Youssef et al.’s (2007) study.

Criticisms of Psychological Capital

Despite convincing evidence of the strength of PsyCap, it has not avoided criticism in relation to its construct validity, overlap with other constructs and research method used. First, although PsyCap
purports to be a higher order construct with discriminant and convergent validity, it is criticised for minimal exploration of the conceptual basis of its constructs on the grounds that the four constructs are similar and without construct validity (Hackman 2009). Further, PsyCap appears to have conceptual similarities to Core Self Evaluations (CSEs) which is a multidimensional construct consisting of fundamental subconscious self-appraisals such as: self-esteem; generalized self efficacy; locus of control; and emotional stability affecting an individual’s self evaluation (Judge & Bono 2001). There seems to be overlap in composition between PsyCap and CSE constructs between the following sets of concepts: generalised and specific efficacy; locus of control and optimism; emotional stability and resilience. Supporters of PsyCap acknowledge the similarities between PsyCap and CSEs but defend PsyCap on the grounds of there being an acceptable convergent and discriminant validity between the two (Avey et al. 2010). Mitchell and Jolly (2004) argue that to achieve discriminant validity between two unrelated constructs a near zero score is required, a score between -.20 and +.20 is acceptable. For discriminant validity the near zero correlation is not required.

Three studies have addressed the issue of validity. First, Luthans et al. (2007) compared CSE and PsyCap and found a strong positive correlation with $r=.60$ for CSE, and a moderate relationship with extraversion ($r=.36$) and conscientiousness ($r=.39$). This was explained by Luthans et al. (2007) as the result of a theoretical overlap between the two constructs meaning that convergence will occur, however, regression analysis shows that PsyCap contributed greater to the job satisfaction measure than CSE. Second, Gooty, Gavin, Johnson, Frazier and Snow (2009) used confirmatory factor analysis and chi square to find two distinct factors. Third, Larson and Luthans’ (2006) found PsyCap unrelated to human capital but significantly related to social capital using a correlation of $r=.422$.

The second major critique of PsyCap focuses on the use of a single methodology that lacks rigour and robustness (Hackman 2009). The methodology is based on self-report measures with correlation tests so that there is a problem arising from risk of common method variance that reduces the interpretability of the research. From the outset, Luthans (2002a) has been clear to develop PsyCap based on valid measures and research methodologies. In later research, Luthans et al. (2007) acknowledge the opportunity for bias arising from self-reports, especially in relation to performance.
The difficulty is in gathering objective performance indicators as they are time consuming and may be outdated and inadequate in measuring the desired outcomes as they are not designed for the specific research. To overcome this, multiple measures or a test-retest design may be used. As studies into the effectiveness of PsyCap in the work place have been related to job performance based measures, the reliance on self-reporting is a major criticism that can only be overcome by the use of other multiple source measurement methodologies (Fineman 2006).

Although PsyCap has been applied to a range of organisational issues including job performance, engagement, well being, absenteeism and leadership, it remains a relatively new construct that is under researched in terms of its application to training and development. The following section reviews those few studies that have applied PsyCap, or elements of it, to training and training motivation.

**PSYCHOLOGICAL CAPITAL AND TRAINING**

Studies into various aspects of positive states include the impact of individual psychological states on the effectiveness of training and development programs and the relationship between self efficacy, one of four PsyCap individual construct, and training transfer. A study of performance and outcome by Erez and Isen (2002) found positive affect influences all three components of Vroom’s (1964) expectancy theory. Expectancy theory predicts that individuals will be motivated by good performance (expectancy) and this performance will lead to three secondary outcomes of rewards, recognition and satisfaction. Erez and Isen (2002) conclude that influence on motivation occurs not by response bias or general activation, but through influence on cognitive processes involved in motivation. A study into the relationship between a single PsyCap construct, self-efficacy and training by Combs and Luthans (2007) found an employee’s level of self-efficacy can be improved to facilitate higher levels of training transfer into the work place. This study specifically examined diversity training in the United States and found, inter alia, that high levels of diversity self efficacy as a trainee personality characteristic were an important success factor in diversity training.
Individual positive psychological concepts have been studied to ascertain their co-relation with pre-training motivation. These include constructs that constitute PsyCap, namely: goal orientation as an element of hope (Klein, Noe & Chongwei 2006); goal mastery as an element of optimism (Chiabura & Marinova 2005) and self-efficacy (Colquitt, Lepine & Noe 2000; Combs & Luthans 2007). Independently these positive states correlate with pre-training motivation and training transfer, however, it is not known whether a combination of the four states which constitute the higher order construct, PsyCap, will result in higher correlation levels than individual positive states. If this proves to be the case, then PsyCap will have valuable and practical implications for pre-training interventions to maximise training transfer.

A link between positive states for training and PsyCap was found by Combs et al. (2009). They argued that PsyCap characterises the cognitive factors and processes necessary for sustained learning and training motivation. Thus, PsyCap may positively relate to trainee motivation in a training and development context. While no empirical research investigates whether the development of PsyCap raises training transfer motivation directly, indirect evidence for the PsyCap relationship is found in studies examining psychological well-being (Avey, Luthans, Smith & Palmer 2010), organizational change (Avey, Wernsing & Luthans 2008) and turnover and job satisfaction (Luthans, Avolio, Avey & Norman 2007).

CONCLUSION

This paper has reviewed previous research in training transfer motivation and positive psychological states and demonstrated the value of PsyCap to furthering understanding of training transfer motivation. The review raises three issues for further research. First, based on the meta analysis of training transfer motivation by Burke and Hutchins (2007), there is a need for further research into the relationship between positive psychological traits and states and training transfer motivation to develop trainee profiles that allow appropriate interventions to enhance training transfer. PsyCap is worthy of being employed in such research to assess the psychological traits and states. Second, because the use of PsyCap in training motivation has been limited to only one of its four constructs, self-efficacy (Combs & Luthans 2007), there is a need to incorporate all four PsyCap constructs (self-
efficacy plus hope, optimism and resilience) to test whether PsyCap as a higher order construct has a higher correlation to increasing training transfer motivation than each of the individual constructs.

Third, and in the longer term, longitudinal studies should be employed to evaluate whether higher training transfer motivation is achieved after PsyCap interventions.

Training, as an essential of the learning organisation, will gain increased attention in workplaces of the future and part of this attention must be given to improving training transfer. A deeper understanding of pre-training environment and training antecedents will assist in post training transfer of knowledge, skills and desired behaviours. This paper contributes to the relatively new field of POB by suggesting a further application of PsyCap to training transfer motivation taking it beyond previous research on job performance, job satisfaction, well being and engagement. A further contribution is to better understand pre-training motivation and training transfer through the inclusion of PsyCap.

**Acknowledgement**

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REFERENCES


FIGURES

Figure 1: An Integrative Model of Motivation to Transfer Training (Gegenfurtner, Veermans, Festner & Gruber 2009)
Table 1: Summary of the Learner Characteristics - Transfer Link (Burke & Hutchins 2007)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Strong or Moderate relationship with transfer</th>
<th>Mixed Support</th>
<th>Minimal empirical research exists</th>
<th>Research is needed to clarify or to build findings</th>
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<tbody>
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<td>Cognitive ability</td>
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<td>Self-efficacy</td>
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<tr>
<td>Pretraining motivation</td>
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<tr>
<td>Motivation to learn</td>
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<td>☐</td>
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<tr>
<td>Motivation to transfer</td>
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<td>☐</td>
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<td>Extrinsic vs. intrinsic motivation</td>
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<td>Anxiety/ Negative affectivity</td>
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<td>Conscientiousness</td>
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<td>Openness to experience</td>
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<td>External vs. internal locus of control</td>
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