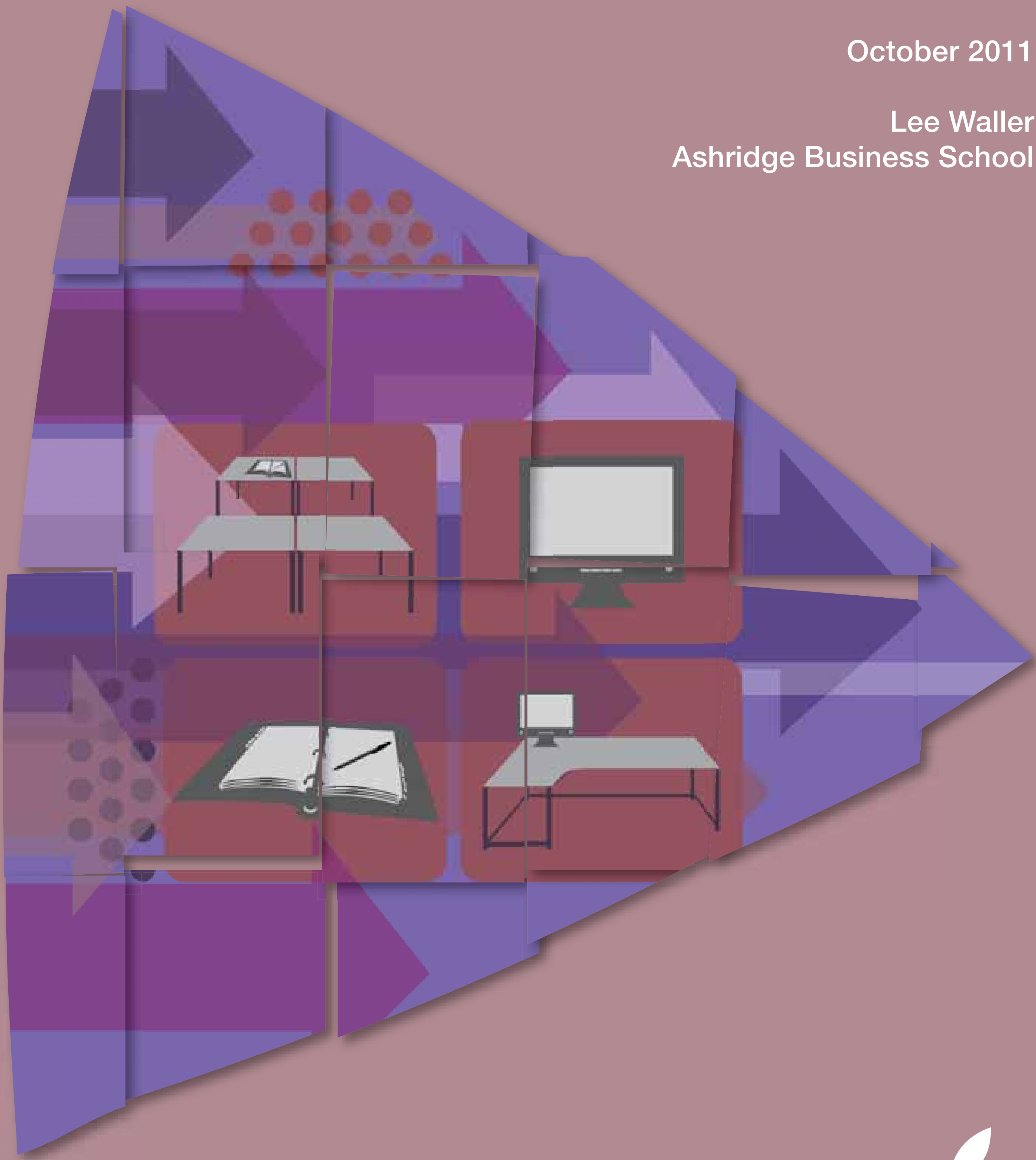
FROM THE CLASSROOM TO THE WORKPLACE

Enhancing the transfer of learning



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ASHRIDGE

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TABLE OF CONTENTS

Executive summary 1

Introduction 5
- Background to the research 5
- An overview of transfer system factors 8

Data collection 11
- Procedure 11
- The tools 11
- The programmes 13
- The participants 13

The findings 15
- Participants' ability to transfer learning 15
- Participant perceptions of the transfer system 21
- The relationship between the transfer system and reported transfer 34

Conclusion and recommendations 37
- Individual characteristics 38
- Programme design 40
- The work environment 42
- In summary 45

References 47

EXECUTIVE SUMMARY

Introduction

The research, conducted by Ashridge Business School between May and October 2010, explores the transfer of learning from management development programmes to the workplace, and considers the influence on transfer of various factors from the three key areas within the transfer system: individual characteristics, programme design, and the work environment.

By gaining a clearer understanding of the effects of these factors on transfer, the research hopes to determine the most appropriate and effective ways of improving transfer at the various stages of the learning process. What can individuals, programme designers, and organisations as a whole do to help to enhance transfer from development programmes?

Data collection

Learning Transfer System Inventory
1 week post programme
88 participants
8 programmes

Transfer of Learning Questionnaire
6 weeks post programme
72 participants
8 programmes

1:1 Telephone Interviews
7-12 weeks post programme
14 participants
7 programmes

The Findings

The findings consider participants' reports of transfer from the programmes, their perceptions of the three key areas of the transfer system (individual characteristics, programme design, and the work environment), and the relationship between these areas and reported transfer.

Reported Transfer

- Participants were able to apply much of the learning, and have seen benefits to their ways of working, and their confidence in tackling unfamiliar tasks
- Participants reported programmes have provided them with the means to do their jobs better, and improved the quality of their work
- Most frequently reported areas in which participants were applying learning were managing teams, and communication skills

Individual Characteristics

- This area was the strongest predictor of transfer, and was rated as the strongest facilitator of transfer
- Participants were keen to attend programmes, but were often not clear as to what to expect
- They did however, perceive various benefits of attending programmes such as development opportunities, preparing for the next role, and developing leadership skills
- Participants were motivated to apply learning, and confident the learning would improve performance
- They took responsibility for applying learning, and were creating opportunities to use new skills
- Many however, found they reverted to familiar ways of working when under pressure

Programme Design

- This area was the weakest predictor of transfer, and only a weak facilitator of transfer
- Some found programmes did not reflect job roles
- The majority however, found the content to be relevant
- Programme methods such as practical sessions, feedback and coaching were found to enhance transfer
- Participants wanted more company specific examples, longer coaching, and more practical sessions

Work Environment

- This area was also only a weak predictor of transfer, and was rated as a weak facilitator of transfer
- Many expected little feedback or support from managers, but appear to have received that support when they returned to work
- This support came in the form of more responsibility, and providing opportunities to develop and utilise learning
- Majority found lack of time was the main barrier to applying learning, although they hadn't anticipated that this would be an issue
- Resistance to change and lack of leadership opportunities also prominent barriers to transfer
- Manager support for applying learning, openness to change and autonomy were considered key facilitators of transfer
- Participants wanted to see more manager support, use of personal development plans, and more development and leadership opportunities

Recommendations

Individuals need to:

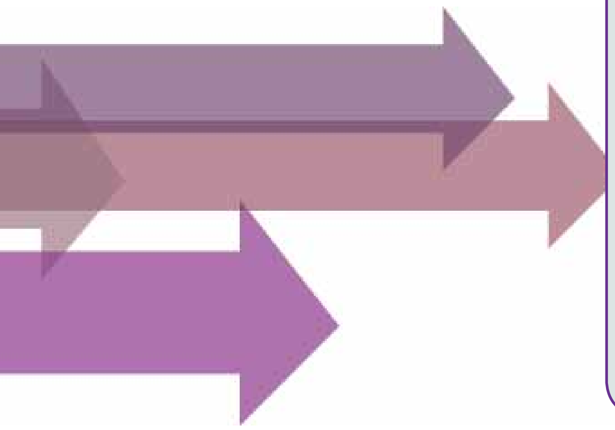
- Ensure they understand how the programme will benefit their role and career
- Identify ways to apply learning to their roles
- Take responsibility for applying learning
- Create opportunities to apply learning
- Seek feedback from peers, direct reports and managers regarding application of learning

Programme designers need to:

- Employ robust diagnostic and design processes
- Ensure content tailored to the individual organisation and industry
- Make connections between content and participant roles
- Provide opportunities to practice skills and develop confidence
- Incorporate coaching and feedback processes

Organisations need to:

- Clarify and communicate programme benefits for performance and career
- Ensure programmes aligned to participant’s roles, objectives and competences
- Position development as reward and recognition
- Facilitate contact with previous participants
- Provide time and opportunities for participants to use learning
- Provide formal or informal feedback regarding application of learning
- Develop PDPs detailing how learning will be applied, and feed back on progress
- Allow individuals to practice new skills and make mistakes
- Demonstrate learning is valued through policies and rewards for development



INTRODUCTION

Background to the research

In the past decade the world of work has changed greatly. As technological advances break down geographical borders and reduce manufacturing and operating costs, even the smallest organisations have greater access to larger markets and cheaper suppliers. In this fast moving and competitive climate, organisations are challenged to develop a real differentiating, competitive edge, which for many lies in their intellectual capital, specifically their human resource[1]. Coupled with the growing need for strong leadership to weather the current economic climate, organisations are becoming increasingly aware of the importance of developing strong leaders and competent managers.

As such, an increased emphasis and a not insignificant investment is being made in the development of employees' competences and work related skills. Estimates put annual global spending on leadership development at over £30 billion[2]. And the current economic uncertainty doesn't appear to be impacting this spending. According to the results of The Ken Blanchard Companies annual Corporate Issues Survey[3], business leaders plan to either maintain or increase their spending on training and development in 2010. Duke CE's 2009 report similarly found that 74% of companies intended to place greater emphasis on leadership development in 2011[4].

However, the research literature concerning the transfer of learning from this investment is rife with statistics suggesting that as little as 10-20% of the learning gained from management development is actually applied on the job[5]. A study surveying 150 organisations suggested slightly more optimistic figures, but nevertheless found that less than 50% of employees transferred learning 6 months after training[6].

It would appear therefore, that there is still much to do to ensure that management development programmes have a tangible impact on individual and business performance. The current research aims to address this by exploring the key influences on the transfer of learning from management development programmes, assessing levels of transfer, and considering how individuals, training practitioners and organisations might improve transfer by practical interventions at the various stages of the learning process.

A model of transfer

Transfer of learning, in the context of training and development, is generally defined as the application, generalisation and maintenance of knowledge, skills, and learning acquired through training[7]. One issue particular to management development training is that it is not just about the acquisition of skills and knowledge, but invariably involves acquiring complex skills, developing new behaviours and changing attitudes. Transfer of this type of learning therefore requires more than just memory, and involves the complicated interaction of an intricate web of factors.

The variables which are known to influence this transfer process are encapsulated by Baldwin & Ford's model of transfer[8], shown in Figure 1, which suggests that trainee characteristics, training design and the work environment all affect the transfer of learning. The model argues that all three areas directly influence the learning and retention of material. Learning and retention in turn have a direct influence on transfer. However, this impact is greatly influenced by the trainee's characteristics and the work environment to which the individual returns.

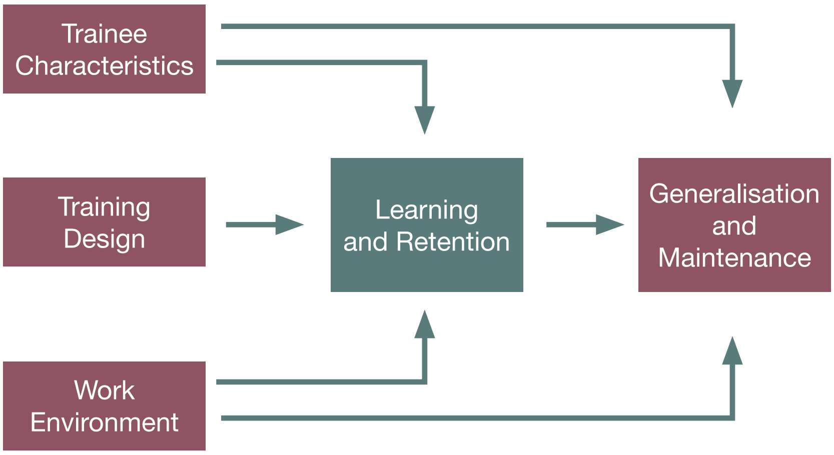


Figure 1: Baldwin & Ford's Model of Transfer[i]

Baldwin and Ford's model is useful in helping us to identify at which level, and indeed at what stage in the learning process, interventions to improve transfer should be targeted: the trainee; the programme design; or the work environment. However, the factors within these categories exert their influence through a variety of ways, as illustrated in Kirwan & Birchall's adaptation of Holton's HRD Evaluation Research and Measurement Model[9], shown in Figure 2 opposite[10]. For them, the combined effects of motivation to transfer and personal capacity to transfer are central to the model – most factors bear an influence on motivation to transfer, however, according to Kirwan & Birchall[10], they will not result in generalised and maintained learning unless an individual has the personal capacity to transfer.

[i] This material has been reproduced with the permission of John Wiley & Sons, Inc.

Given these potential mediating effects, it is necessary to consider all factors within the individual, training or organisation which influence transfer if we are to get a clear picture of the potential for transfer from any given development programme within any given organisation. Holton et al refer to these factors as the 'transfer system'[11].

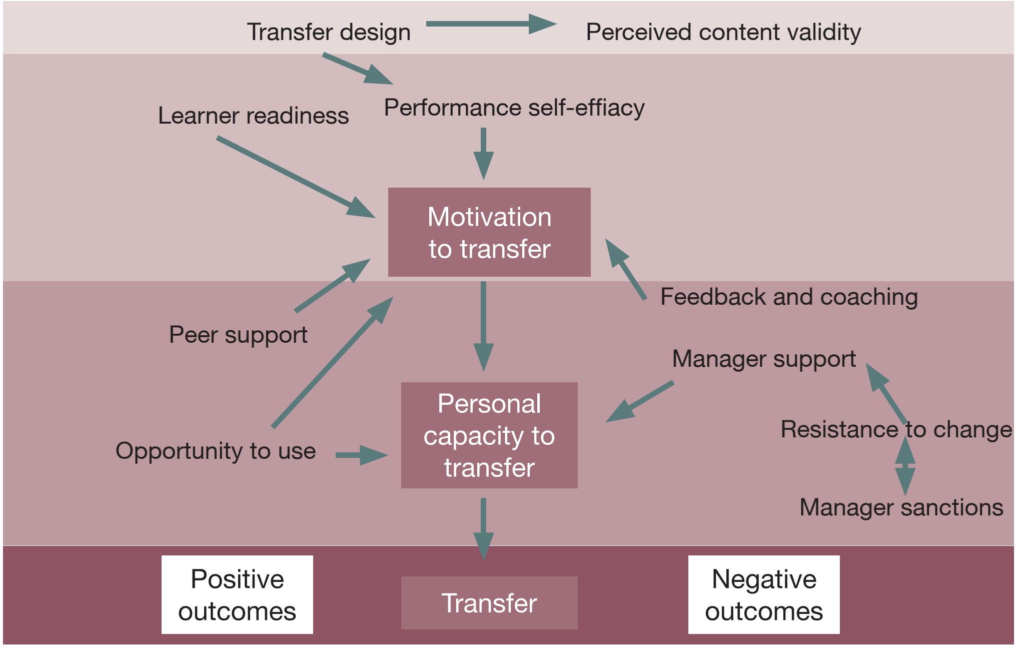
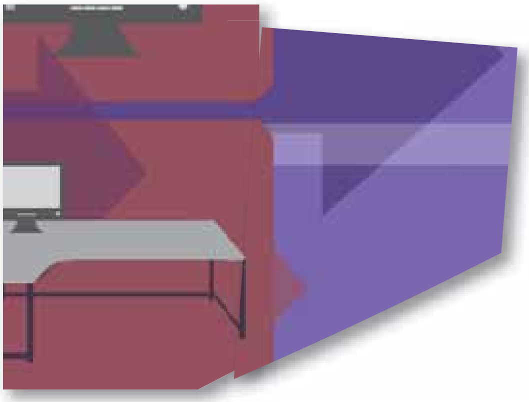

Transfer design
Perceived content validity
Learner readiness
Performance self-effiacy
Motivation to transfer
Feedback and coaching
Peer support
Manager support
Personal capacity to transfer
Resistance to change
Opportunity to use
Manager sanctions
Positive outcomes
Transfer
Negative outcomes

Figure 2: Kirwan & Birchall's Model of Learning Transfer



An overview of transfer system factors

Individual characteristics

The first area of focus is individual (trainee) characteristics: whether participants possess the appropriate knowledge, skills and attitudes to learn and transfer what is being taught.

Whilst cognitive ability will clearly influence whether an individual has the mental capacity to learn new skills, what research consistently suggests is particularly critical to the transfer process, is whether when they arrive in the classroom they are motivated to learn and to transfer their learning[12,13]. This **motivation to transfer** is influenced by a variety of factors, the most important of which appear to be the perceived relevance of the programme and the material delivered; the perception communicated through line managers and the organisational culture that transfer will lead to positive results; and by the individual's belief that they have the autonomy and the ability to transfer what they have learned[14,15].

This latter factor results primarily from an individual's **performance self-efficacy**; that is, their belief that they will be able to transfer what they've learned and change their performance[16]. Again, research has consistently found a strong relationship between self-efficacy and transfer, both directly and through its mediating effect on training motivation[16,17].

Programme design

The second area refers to the design of the programme itself. Holton, Bates & Ruona[11] term this factor 'transfer design' which they describe as a programme which '*has been designed and delivered in such a way that provides trainees with the ability to transfer learning back to the job*' p.284[16]. The literature suggests that one of the most critical aspects of training design is the need for the **content of the programme to reflect the reality of the individual's workplace**, increasing relevance and therefore motivation to learn[12].

As already discussed, confidence and **self-efficacy** have a strong influence on an individual's ability to learn and motivation to transfer, and programmes can influence this through activities which provide **opportunities to practice** new skills and behaviours and develop skills through **incremental steps**[17]. Feedback processes which provide information on progress and opportunities for individuals to adjust their behaviour, also build confidence in the development and transfer of skills[8].

Transfer System Factors Definitions

Learner readiness: the extent to which individuals are prepared to enter and participate in learning

Motivation to transfer: the extent to which individuals are motivated to use their knowledge and expertise in their work

Performance self-efficacy: an individual's general belief that they are able to change their performance when they want to

Transfer-effort performance expectations: the expectation that effort devoted to using learning will lead to changes in job performance

Performance-outcome expectations: the expectation that changes in job performance will lead to outcomes valued by the individual

Content validity: the extent to which individuals judge learning content to reflect job requirements accurately

Transfer design: the extent to which learning has been designed to match job requirements and give participants the ability to transfer learning to the job

Personal capacity to transfer: the extent to which individuals have the time, energy and mental space in their work lives to make changes required to use learning on the job

Opportunity to use: the extent to which individuals are provided with or obtain resources and tasks on the job enabling them to use knowledge and expertise

Supervisor support: the extent to which managers support and reinforce learning on the job

Work environment

The final area of influence on the transfer of learning from development programmes is the work environment to which a learner returns. Often referred to as the 'transfer climate', this area is crucial to transfer because the factors involved can have an influence on both an individual's motivation to transfer, and on their personal capacity to transfer[11]. As motivated as any participant may be to apply what they've learned back at work, if they don't have the time, energy or mental space to do so, the learning is likely to be forgotten.

As one might expect therefore, research suggests that opportunities to use new skills and behaviours are important to the transfer of learning[14]. However, when practicing new behaviours comes into conflict with pressing job requirements, manager support appears to be just as crucial, in terms of supporting the application of learned behaviour and in allowing autonomy so that individuals can create their own opportunities to use new skills[18,19]. Managers can also support their employees by providing an indication of how well new skills are being performed through performance feedback[20]. Conversely, managers can also inhibit transfer though manager sanctions and a resistance to change[10].

The literature suggests that transfer can be encouraged by support from across the entire organisation, including peers as well as management[12]. Essentially, a perception that learning is important and valued, which is supported through clear policies and rewards for development, encourages motivation to apply learning, and promotes a continuous learning culture[21].

An interesting finding from the participation literature adds further support to the importance of the transfer climate on transfer of learning, suggesting that individuals who received no support for transfer from previous programmes are unlikely to participate or be motivated to transfer themselves from future programmes, and will in turn not support other's efforts to transfer[22]. So a supportive environment can have an impact on learning transfer both now and in the future.

Transfer System Factors Definitions continued

Supervisor sanctions: the extent to which individuals perceive negative responses from managers when applying new learning

Peer support: the extent to which peers reinforce and support use of learning on the job

Positive personal outcomes: the degree to which applying learning leads to outcomes that are positive for the individual

Negative personal outcomes: the extent to which participants believe that applying their knowledge and expertise will lead to negative outcomes

Performance coaching: formal and informal indicators from an organisation about an individual's job performance

Resistance to change: the extent to which work groups are perceived by individuals to discourage use of new knowledge and expertise

The evaluation literature

Whilst there is clearly a good understanding within the academic community at least regarding the factors which bear influence on transfer of learning from development programmes, there does not appear to be a real interest within the practitioner community in the assessment of this transfer. Rivera & Paradise[23] for example, found that only 38% of 39 organisations assessed impact at Kirkpatrick's behaviour or results levels (see figure 3), and similarly, Balaguer et al found that nearly 40% of 251 organisations had no formal measures for linking training to business performance indicators[24]. As Hutchins & Burke found that training practitioners erroneously believed that trainee reactions were indicative of transfer[25], perhaps this is really a reflection of a lack of understanding around the area of transfer both in terms of what it is and how it can be influenced.

As such, there is a need for further research which clearly explicates the various influences of different factors on the transfer of learning, and allows us to draw conclusions as to how and when we might intervene to improve transfer from management development programmes.

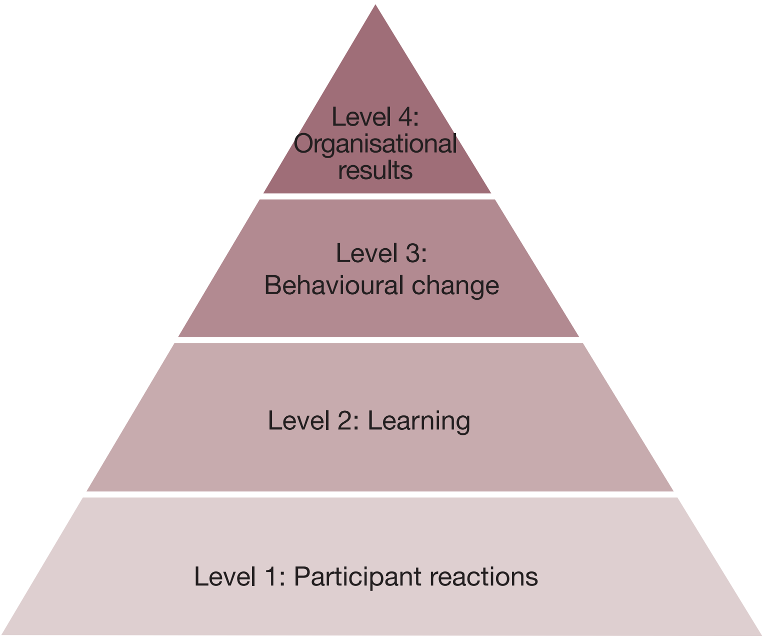

Level 4: Organisational results
Level 3: Behavioural change
Level 2: Learning
Level 1: Participant reactions

Figure 3: Kirkpatrick's four levels of learning evaluation

DATA COLLECTION

Procedure

Data was collected through two questionnaires and a number of 1:1 telephone interviews in order to generate both quantifiable results and a richness of data. The first questionnaire, the Learning Transfer System Inventory (LTSI)[26], was sent to participants one week after the development programmes were held, ensuring the programmes were still fresh in their minds whilst allowing for most employees to have returned to work. The second questionnaire, a transfer of learning questionnaire, was sent 6 weeks after the programme, allowing opportunities for participants to apply what they had learned. Both questionnaires were sent by email and completed online, with reminders sent 2 weeks after the first email.

Shortly after completion of the second questionnaire, 1:1 telephone interviews were held with two participants randomly selected from each programme to explore their experiences in regards to transferring the learning from the programmes.

The tools

The Learning Transfer System Inventory

The LTSI Version 3.026 is a self-report, 51 item questionnaire that measures 16 dimensions of the learning transfer system as discussed above, and detailed on page 6. The questionnaire employs likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). 34 items relate to the specific programme attended (e.g. ‘It is clear to me that the people conducting the training understand how I will use what I have learned’), and 17 items relate to training in general (e.g. ‘When I do things to improve my performance good things happen to me’.)

A high overall score on this tool suggests that the individual’s ‘transfer system’ is likely to promote transfer.

Transfer of learning questionnaire

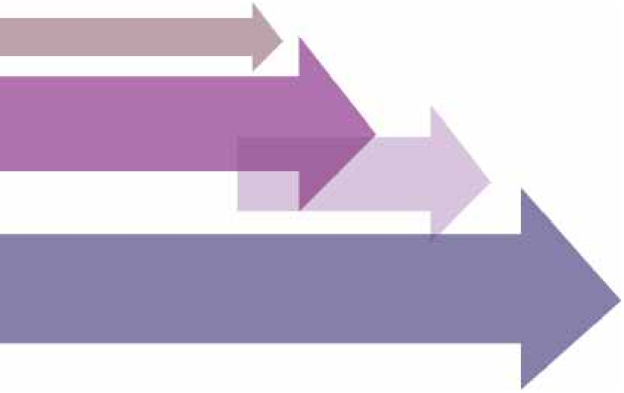
This questionnaire is a self-report measure comprising 9 likert scale items using the same response scale as the LTSI, and 6 open ended questions. The scale items provide a generic measure of transfer of learning from management development programmes (e.g. *'Whenever I get the chance I put the learning from the programme into practice'*), and the open ended questions allow participants to comment on barriers or facilitators to transfer (e.g. *'If you faced any barriers that restricted you in applying what you learned on the programme back to the workplace, please list up to 3 here'*.) The questionnaire is based on Facteau et al's[27] and Xiao's[28] transfer questionnaires.

A high score suggests that participants have been able to apply much of what they have learned.

Both measures were taken in order to investigate possible correlations between the three key areas – individual characteristics, programme design, and the work environment, and reported transfer.

1:1 interviews

Interviews were conducted over the telephone, and were semi-structured, asking questions which explored participants' perceptions of the various transfer system factors, and their experiences in attempting to apply what they had learned (e.g. *'Can you give me examples of something new that you have tried since attending the programme that worked?'*).



The programmes

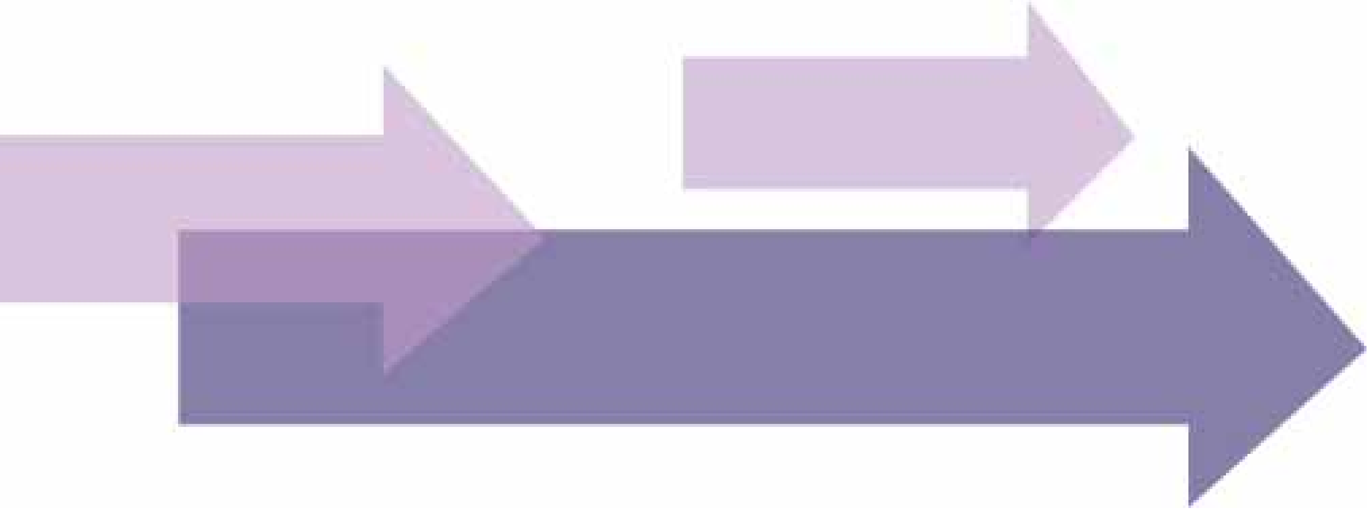
The programmes were tailored management development programmes which focused on the development of leadership skills for participants ranging from new leaders to senior managers. The average length of a programme was 3.8 days, ranging from two to seven and half days.

The participants

A total of 144 employees from seven organisations attended eight different management development programmes delivered at various locations across Europe. The average number of participants per programme was 18. Five of the organisations were private sector, and the remaining two UK public sector.

88 participants completed the first questionnaire (a response rate of 61%) and 72 completed the second questionnaire (response rate of 50%).

14 participants were interviewed, 2 each from 7 of the participating programmes.



FINDINGS

This section reports on the findings from the surveys and the 1:1 interviews, and details 1) whether participants were able to transfer their learning, and what type of skills transferred; 2) participants' perceptions of the various aspects of the transfer system; and 3) the relationship between the different aspects of the transfer system and reported transfer.

Participants' ability to transfer learning

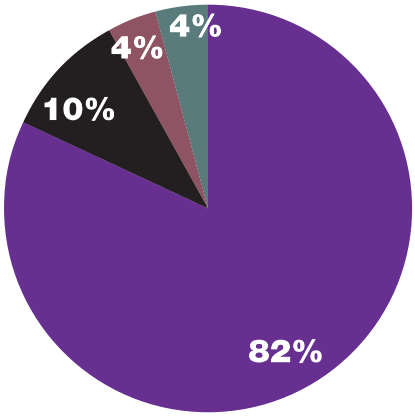
The average overall score for reported transfer was 3.57 out of 5, (71%) (n = 72). As the scale was devised to determine whether a correlation existed between transfer and the transfer system, there is no defined 'good' or 'bad' score, and therefore lower scores do not necessarily mean that transfer is not taking place, but that there is scope to improve the learning transferred from the programmes.

Average scores from a scale ranging from 1-5 have been converted to percentages for ease of interpretation and comparison.

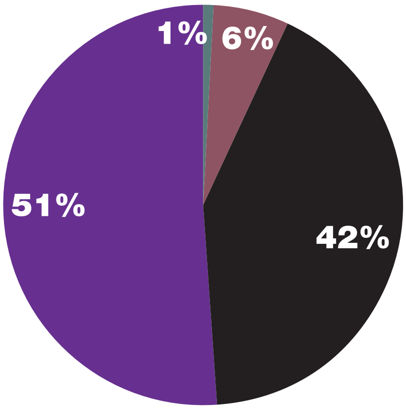
Percentage scores for each of the questions are shown overleaf:

Participants' ability to transfer learning

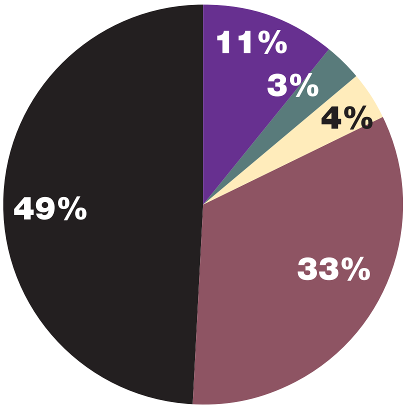
1. I have applied some or all of the learning from this programme in my work and professional activities



2. I have changed my approach to my work to be consistent with the material taught on the programme



3. Supervisors, peers or subordinates have told me that my work behaviour has changed following the programme



🟨 I strongly disagree

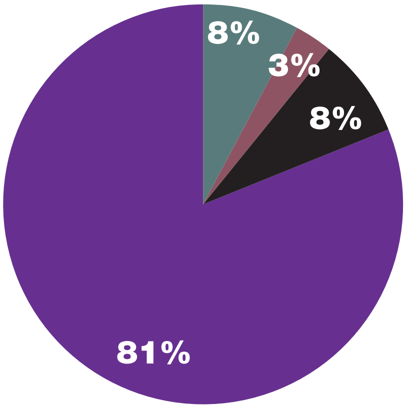
🟥 I disagree

⬛ I neither agree or disagree

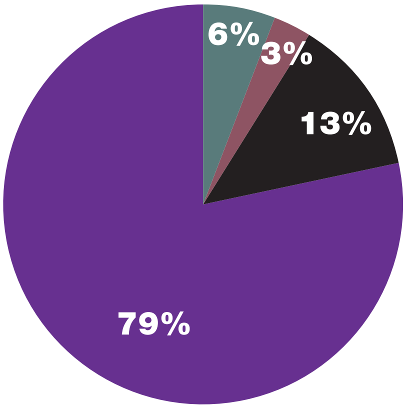
🟪 I agree

🟦 I strongly agree

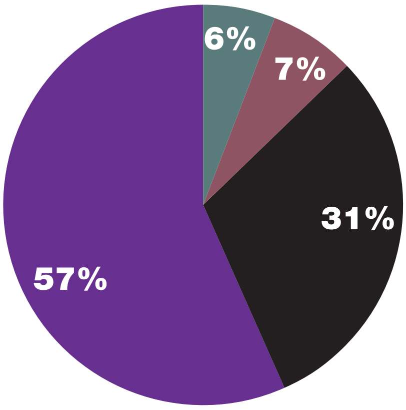
4. Whenever I get the chance I put the learning from the programme into practice



5. Using what I have learned from the programme benefits my ways of working

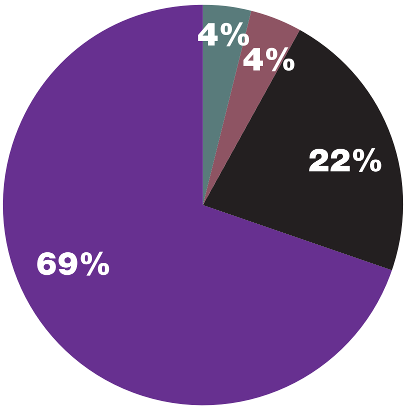


6. I am more confident in tackling unfamiliar tasks and situations thanks to what I learned on the programme

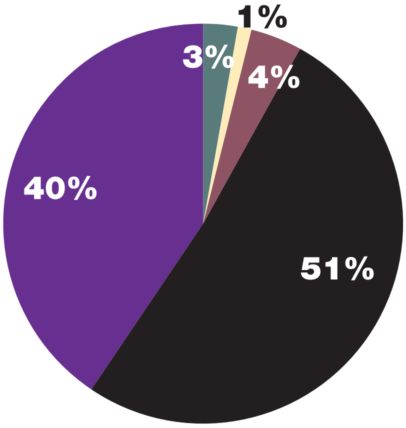


Participants' ability to transfer learning continued

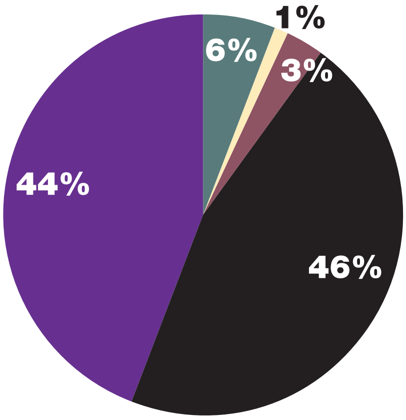
7. Thanks to the programme, I have the means to do my job better



8. My work performance has improved due to what I have learned on the programme



9. My work is of better quality when I use what I have learned on the programme



🟨 I strongly disagree

🟫 I disagree

⬛ I neither agree or disagree

🟪 I agree

🟩 I strongly agree

The average overall score of 71% suggests that the participants were able to apply much of the learning from the programmes, and have seen some positive benefits of doing so.

The responses of over 50% of participants to questions 1 and 4 of the transfer questionnaire found that nearly nine out of 10 participants were attempting to apply their learning: 86% agreed or strongly agreed that they had applied some or all of their learning in their work activities; and 89% also agreed or strongly agreed that whenever they got the chance they put the learning from the programme into practice.

Examples of application

The responses of over 50% of participants to questions 5, 6, 7 and 9 also found that nearly seven out of 10 participants perceived that the programme had helped them to do their jobs better: 85% agreed or strongly agreed that using what they learned benefitted their ways of working; 63% agreed or strongly agreed that they were more confident in tackling unfamiliar tasks and situations; 73% agreed or strongly agreed that they had the means to do their jobs better; and 51% agreed or strongly agreed that their work was better quality when they used what they learned on the programme.

A number of areas where participants were able to apply their learning were identified in the interviews and open ended survey questions. The tag cloud below illustrates those mentioned on two or more occasions: the larger the word, the more prominent the theme.

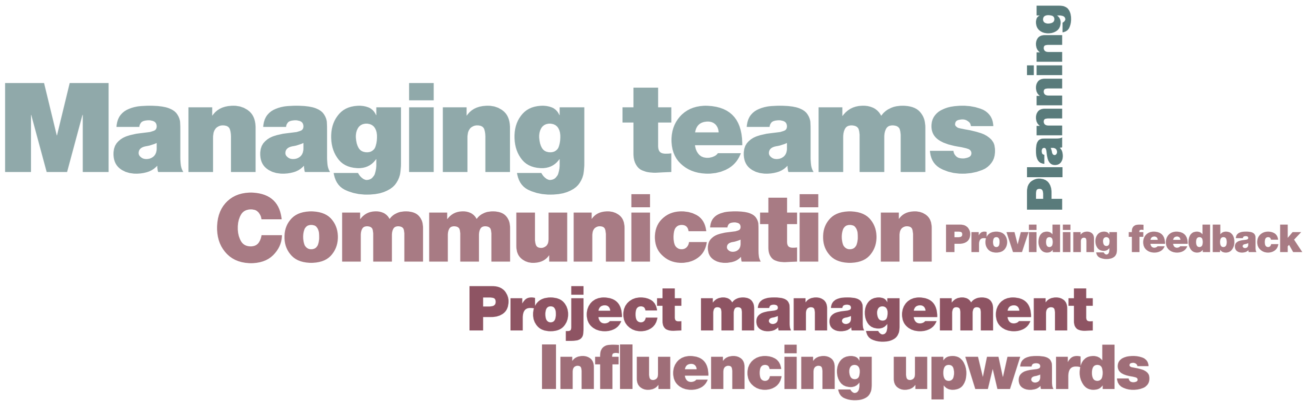
Summary

Participants were able to apply some of the learning, and have seen some positive benefits

Participants perceived that the programmes were helping them to do their jobs better and improving the quality of their work

Most frequently reported areas in which participants were applying learning were managing teams, and communication skills

Examples of application



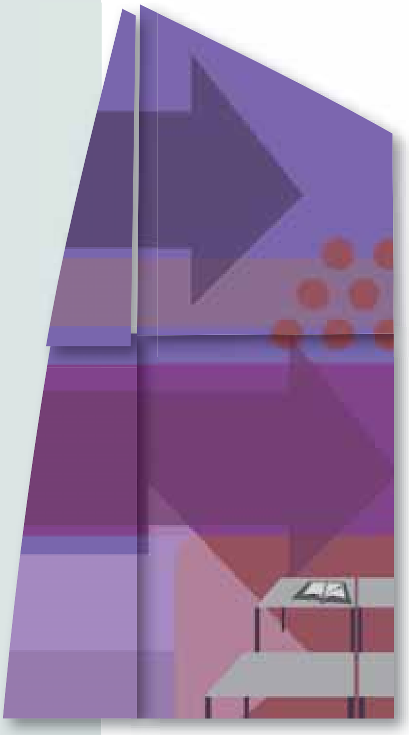
“What I’ve been trying to do is apply some of the interpersonal learning and group dynamics learning”

Most frequently mentioned was managing teams, which included aspects such as improved trust, paying attention to group dynamics, clarifying responsibilities etc.

“I’ve really tried to, in meetings here after that, tease out more of people’s thoughts, particularly team members who are a little bit more reluctant to speak in public and who have great ideas, so I’ve really tried to build those folks up and bring their feedback out and structure meetings in a way that really gets the full team to be really involved.”

Managing teams was followed in frequency by improvements in communication skills. Individuals were better able to communicate with their teams, with those from different cultures, and with their superiors. One such participant was able to apply the communication skills he had learned at Ashridge to running a project in Brazil.

Improved project management skills and influencing upwards also emerged, but as less frequent themes, followed by providing feedback and planning.



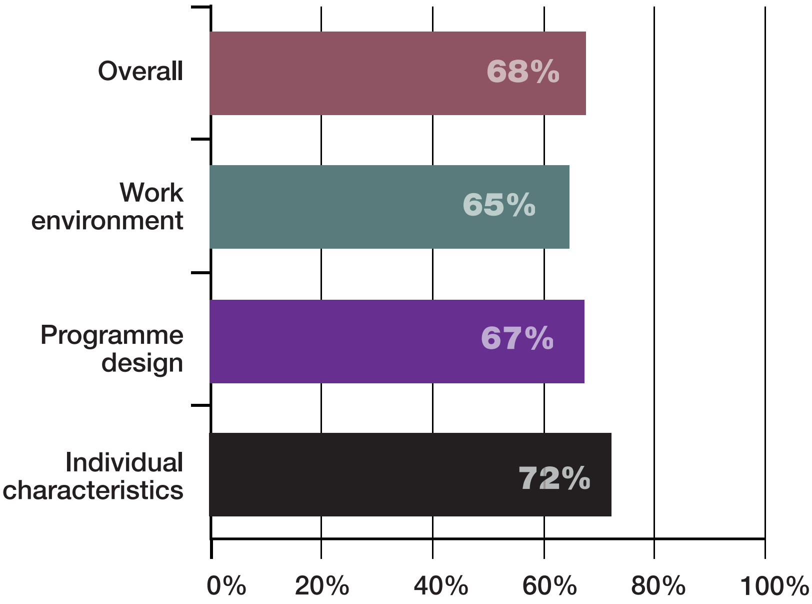
Participant perceptions of the transfer system

The LTSI is based on the theoretical framework proposed by Noe[29] which considers work behaviour to be a function of ability, motivation and environmental factors. The scales used in the inventory however, also fall into one of the three areas in Baldwin & Ford's model of transfer[8] (see figures 1 above). Therefore, alongside the findings for the 16 factor scales, we also combined the scales into three super scales of individual characteristics, programme design, and work environment, in order to understand their respective influences on learning transfer.

Whilst the sample size was not large enough for a factor analysis to provide any meaningful data regarding these three super scales, a cronbach alpha did support their validity[ii].

Average scores from a scale ranging from 1-5 for overall transfer system, and for these three super scales have been converted to percentages for ease of interpretation and comparison. For interpretation purposes, the following classification has been used:

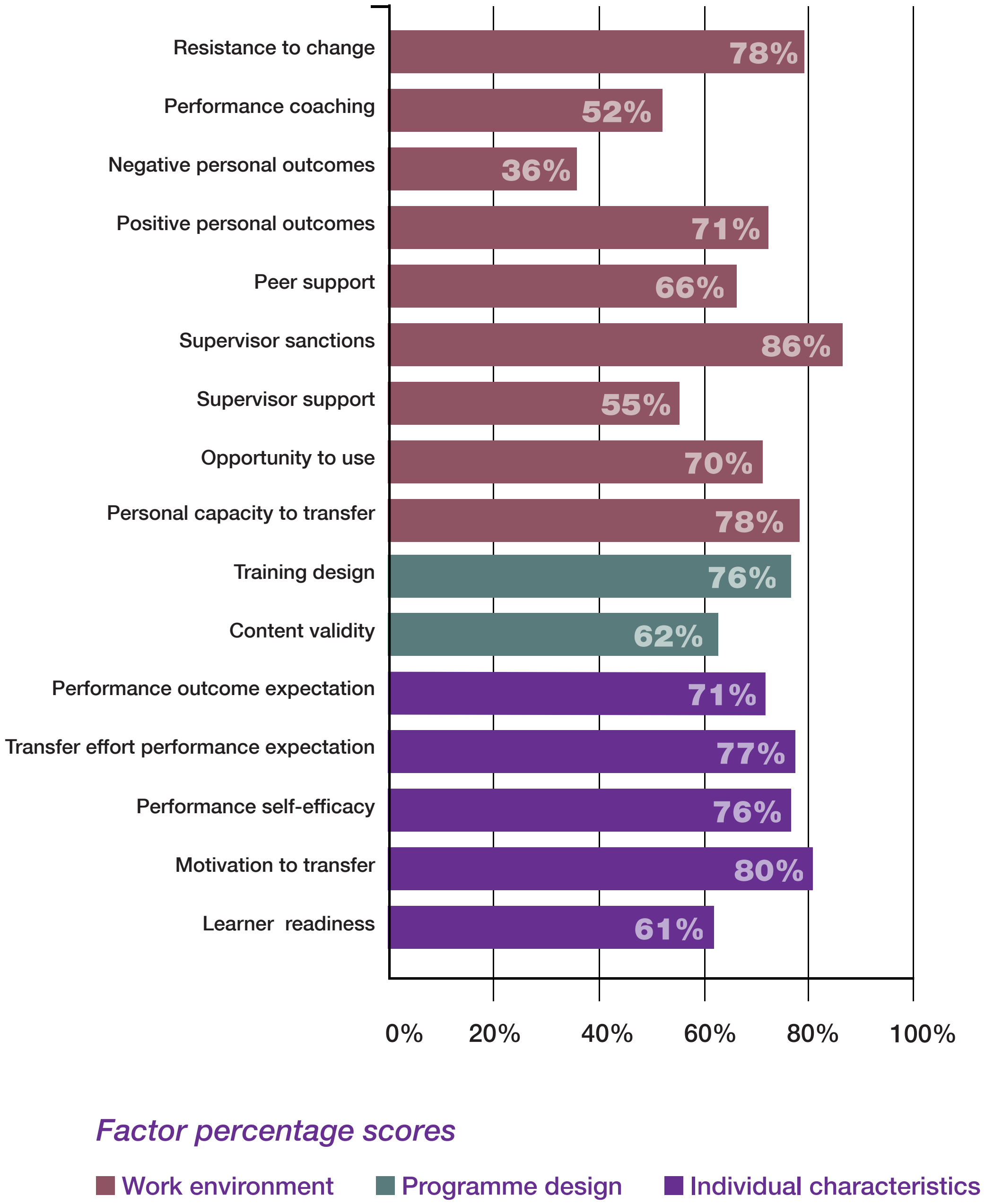
Less than 50%	Barrier to transfer
51 – 70%	Weak facilitator of transfer
71 – 80%	Facilitator of transfer
More than 80%	Strong facilitator of transfer



Category percentage scores

[ii] Individual characteristics = 0.84
Programme design = 0.82
Work environment = 0.84

Whilst the variation between the scores for the three areas appears small, an analysis of variance found the differences to be significant[iii]. The area of individual differences was the only area to be considered a facilitator of transfer using the classification above. A breakdown of the average scores for the constituent factors is shown below.



[iii] A repeated measures one-way analysis of variance found a significant difference between the means of the 3 super scales $F_{2,145} = 31.79$, $p<0.01$.

Individual characteristics & programme design: mean difference = 0.196, $p<0.05$; individual characteristics & work environment: mean difference = 0.362, $p<0.05$; programme design & work environment: mean difference = 0.166, $p<0.05$

Individual characteristics

Participants rated the area of individual characteristics the highest of the three areas with an average score of 73%, suggesting this is the area most likely to promote transfer of learning.

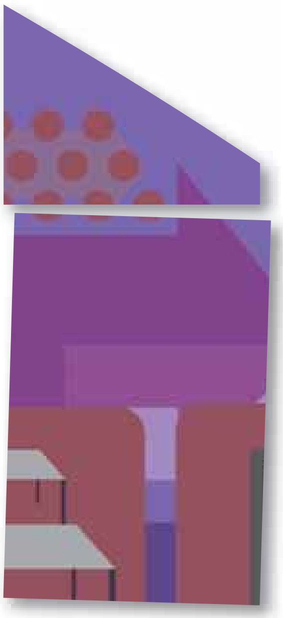
Three main themes emerged from the qualitative data in respect of individual characteristics: attitudes to programme attendance; expected programme benefits; and attitudes to applying learning.

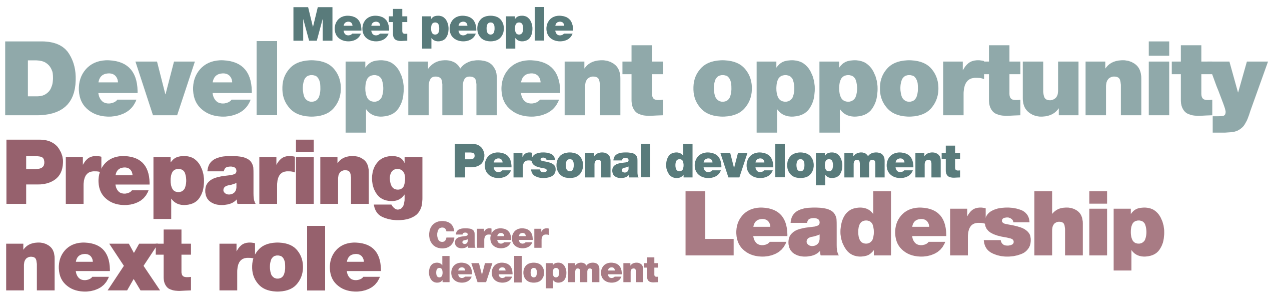
Attitudes to programme attendance

The only score within the individual characteristics scale classified as a weak facilitator of transfer was *learner readiness*, with a score of 61%, suggesting that not all participants were clear as to what to expect of the programme or understand how it linked to their development before commencing the programme.

This low score was reflected in the qualitative data where many reported that they **did not know what to expect** from the programme, and only one individual from the 14 interviews and 72 transfer questionnaire responses reported being **fully informed** of what the programme was about.

Despite this lack of information many were **keen to attend**, and only a few felt nervous about joining. Word of mouth seems to have played a part, with participants reporting that they had **heard good things** about the programme from colleagues who had attended before.





> “It was a good opportunity for me to be able to get this very specific leadership type training”

Individual Differences Summary

Area was rated as the most likely to facilitate transfer of learning

Keen to attend programmes, but were often not clear as to what to expect

They did however, perceive various benefits of attending programmes

Participants were motivated to apply learning, and confident it would improve performance

They took responsibility for applying learning, and were creating opportunities to use new skills

Reverting to type was an issue for many

The tag cloud above illustrates the type of benefits the participants anticipated from the programme. **Development opportunity** was the strongest theme. Participant’s considered the programmes to be important to their development and expected to benefit from them.

“I definitely knew quite explicitly that it was an important thing to go on and that it would be, you know, it was something absolutely that I should take advantage of.”

Preparing for the next role was quite prominent, however, it should be noted that all of the participants who reported this perceived benefit were from one programme which was a prerequisite for taking on a specific new post. However, whilst this finding may not be generalizable to the whole participant group, it is an indication of the importance of the relationship between the programme and the individual’s role.

Improving **leadership** skills was also a frequently reported theme, followed by **meeting people across the organisation** and **personal development**. A small number of individuals considered the programme to be important for their career development. Only one specified that they did not expect development in terms of their career.

These perceptions of the benefits of the programme help to explain the stronger scores found in the individual characteristics area, in terms of attitudes to applying learning, as detailed below.

Attitudes to applying learning

The strongest factors in this area were an individual’s *motivation to transfer*, their *transfer effort performance expectations*, and their *performance self-efficacy* with scores of **80%, 77%** and **76%** respectively. This suggests that they were well motivated to use their learning; tended to feel that using their learning would lead to changes in job performance; and believed they were able to change their performance.

Again, these findings find support from the qualitative data. Many participants commented that they were eager to apply the learning when they returned to work.

“Well, I was really motivated when I got back, and, you know, speaking to other colleagues on the course, everyone else was as well – they wanted to like conquer the world!”.

The tag cloud below illustrates the various themes that emerged from the interviews and surveys in terms of participants' attitudes to applying learning.

Participant attitudes to applying learning

Have not changed Created opportunities
Responsible for applying
Reverting to type
Have not applied

One of the most prominent themes was that participants considered it to be their responsibility to find ways to apply their learning, and some were creating opportunities to use it. However, equally prominent was the problem that once back at work it was easy to slip back into bad habits:

> *"One has a tendency to fall back on ways of behaving that, you know, are there and you're comfortable with."*

Three participants reported that they hadn't applied their learning, and two reported they hadn't changed how they deal with people.

> "Ultimately it's up to the individual to apply what you've learned"

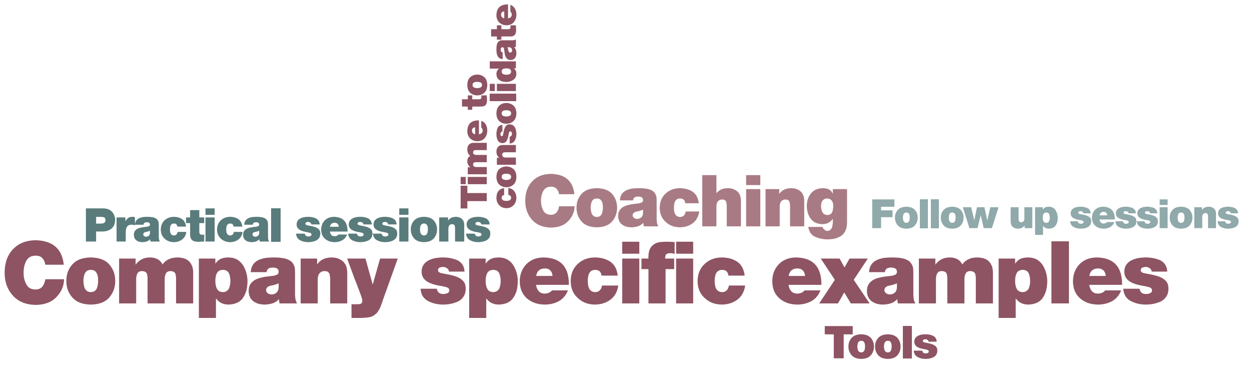
Programme design

Participants scored programme design at 69%, just below the classification of 'facilitator of transfer', which suggests that participants consider the programme designs to promote transfer to some extent, but there is scope for improvement.

Potential barriers to transfer

The average score for *content validity* at 62%, indicates that the factor is a weak facilitator of transfer, and suggests that there may have been a perception that the skills and knowledge taught on the programmes did not as accurately reflect job requirements as they might.

Whilst this could be a reflection of the heterogeneous nature of leadership development programme groups, in that the wide ranging roles means not all the content can be relevant to all participants, this did find some support from the qualitative data as irrelevant content was quoted as a barrier for some participants, as was difficulty to transfer to the real world.



> “Generate a stronger link in between general business topics and the industry”

Participant suggestions for how Ashridge could help improve transfer

Whilst these were the only two aspects of the programmes that participants considered potential barriers to transfer, participants were also asked how Ashridge might better help them get more from the programmes. The tag cloud above illustrates their suggestions, and offers support for the finding that some participants found the content was not relevant to their role as the most prominent theme was more company specific examples. Participants wanted the programmes to be more tailored to their organisation and industry, with more up to date and relevant case studies.

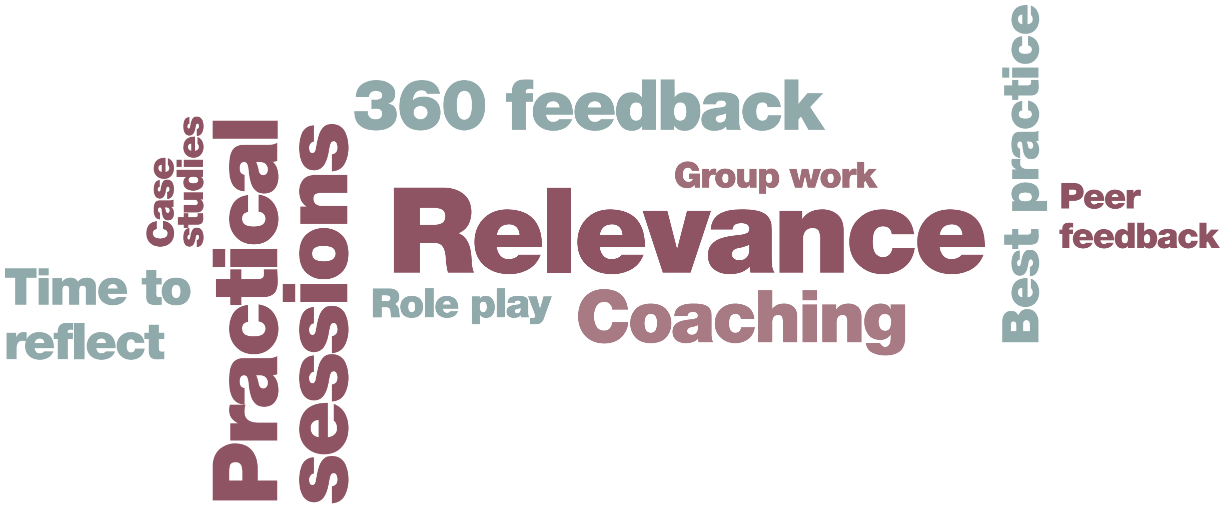
Other, less prominent themes were longer coaching, more practical sessions, and more follow up sessions. Finally, some participants also wanted more time during the programme to consolidate learning, and simple tools to use at work.

Potential facilitators of transfer

The score for *training design* at **76%**, indicates the area is facilitating transfer, and suggests that the way the programmes were designed helped them to apply learning and the methods used did match the work environment.

This is supported by the qualitative data where participants referred to a wide variety of elements of the programmes as facilitators of transfer of learning, as illustrated in the tag cloud opposite.

Reported facilitators of transfer - programme design



The most prominent theme to emerge was the relevance of the content, receiving three times the number of references than the theme of 'irrelevant content' discussed earlier. Participants found that exercises reflected their real work environments, content was tailored to their organisation and industry, and the learning could be applied in their daily work.

"I found the relevance of the material was pretty good … it did kind of mirror quite a lot of situations that happen in the workplace."

Participants also felt that the practical sessions helped in the transfer of learning, helping them to understand the theory, and practice with ways of using it back in the office.

"Many practical tasks that helped to better understand and start to use what we learned."

Feedback on the 360 psychometric and coaching sessions were also prominent themes, as was having the opportunity during the programme to reflect on learning.

Practical examples and learning through best practice were also mentioned, followed by use of role plays, peer feedback, group work, and opportunities to practice.

Programme Design Summary

Area was rated as only a weak facilitator of transfer

Some found programmes did not reflect job roles

Majority however, found the content to be relevant

Programme methods such as practical sessions, feedback and coaching were found to enhance transfer

Participants wanted more company specific examples, longer coaching, and more practical sessions

The work environment

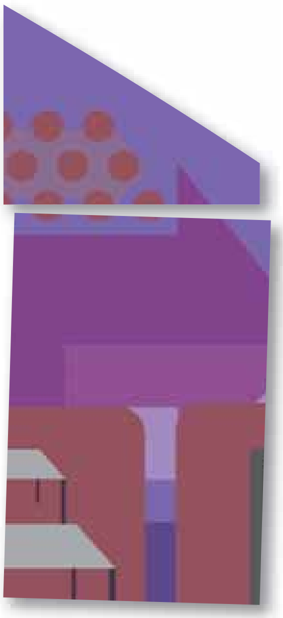
The work environment was rated the lowest of the three areas by participants at 66%, indicating it is a weak facilitator of transfer.

The factors considered either a barrier to transfer, or weak facilitator of transfer in this scale were *negative personal outcomes, performance coaching, supervisor support*, and *peer support* at **36%, 52%, 55%** and **66%** respectively. The facilitators of transfer with the strongest scores were r*esistance to change, supervisor sanctions*, and *personal capacity to transfer* at **78%, 86%** and **78%** respectively.

Potential barriers to transfer

The low score **(36%)** for *negative personal outcomes* indicates this factor is a barrier to transfer, and suggests that participants do not expect to be punished if they don't use newly learned skills. However, whilst this low score could demonstrate a lack of follow up and accountability on the part of the organisation, it is likely that few organisations would actually reprimand their employees for using what they have learned, and as such this score should perhaps be viewed with some caution in terms of what it tells us about the transfer climate of the participating organisations.

The low score for *performance coaching* **(52%)** suggests that participants expected to receive little formal or informal feedback in terms of their performance or when applying new skills which could affect their motivation to use their learning or their confidence in so doing.

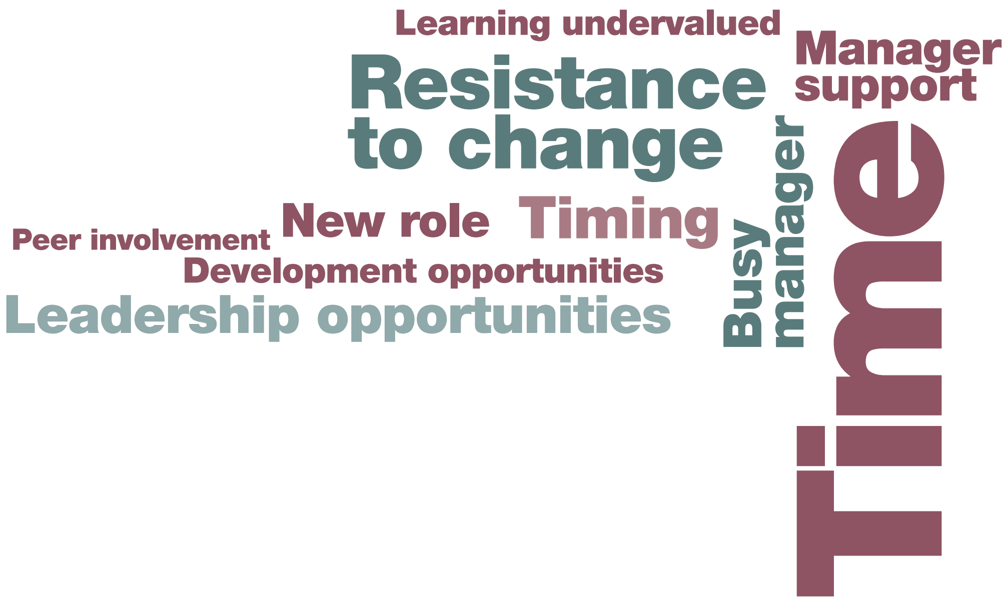


The low score for *supervisor support* **(55%)** is also of concern, and does suggest that participants did not expect to receive the support they needed from their managers in terms of supporting the use of learning, identifying opportunities to apply learning, and setting goals to encourage the application of learning.

The score of 66% for *peer support* also indicates that this factor is only a weak facilitator of transfer, and suggests participants did not expect their peers to reinforce and support use of learning back at work.

Interestingly, the qualitative data is somewhat at odds with some of these findings. The tag cloud below illustrates the areas within the work environment that participants considered to hinder transfer of learning

Reported facilitators of transfer - work environment



Whilst lack of manager support and having a busy manager were themes participants referred to, they were not as prominent as one might have expected given the findings from the surveys. Lack of feedback was not even mentioned as a barrier to transfer, although this could be implicit in lack of manager support. There is however, support for these lower scores in terms of what participants would like to see more of to help them apply learning, which will be considered later in this section.

As is clear, the most prominent theme reported to hinder transfer was time. Participants found that when they returned to work the pressure of heavy workloads made it hard to find the time to try out new ways of working.

“Upcoming project timelines have prevented me from taking a step back to review the learning and to apply.”

Another prominent theme was resistance to change. Participants found that their colleagues were not keen to try new ways of working, and struggled to see the benefits of doing things differently.

“I will face barriers, resistance, because it’s new, because it’s different, from other colleagues.”

“Have been so busy it is hard to take a step back and apply new things.”

Other frequently reported themes were lack of development opportunities, most prominently lack of opportunities to lead, along with problems presented by the timing of the programme. Some participants had to put off applying learning because of demands of specific projects which routinely took place at that time of year.

As previously mentioned, lack of manager support and busy manager were themes of equal prominence. Some participants felt that their managers were not interested in supporting them in applying learning, whilst others could not find the time with their manager to discuss what they had learned.

"I don't really see him that often nowadays because he's got more locations to travel to…so it makes it difficult to feedback him, and keep him aware of you know, my progress."

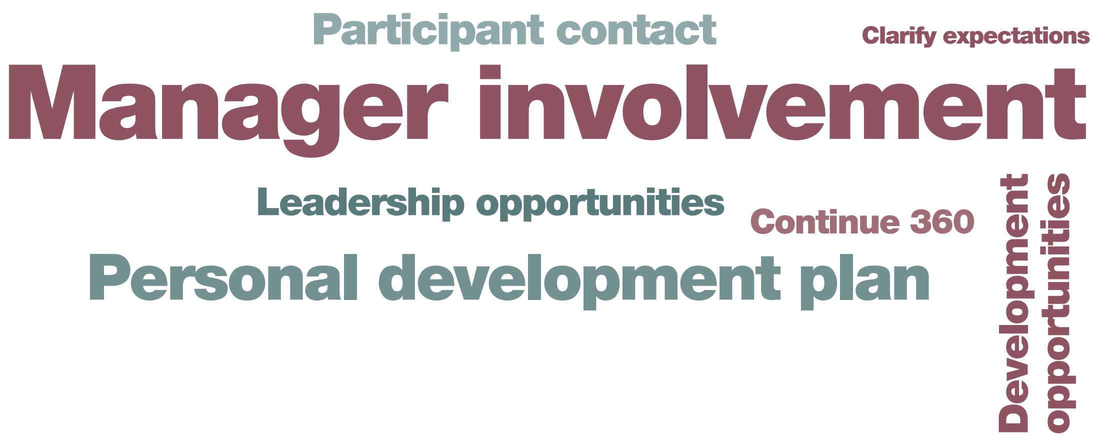
Transitioning role also emerged as a theme. But again, participants who found they were not yet able to apply learning because they had not yet started the job for which the programme prepared them, were from one programme which was a prerequisite for taking on a specific new post.

Some participants felt that the organisation in general had done little to help them apply learning, and others mentioned lack of reward for learning as a barrier to applying learning. Lastly, some participants found that they were not able to apply their learning without the input and involvement of their peers.

Participant suggestions for how the organisation could improve transfer

Again, as referred to above, participants were asked how their organisation might get more value for money from their attendance on the programmes. The tag cloud below illustrates their suggestions.

Participant suggestions for how the organisation could get more value for money from the programmes



As can be seen, greater **manager involvement** was the most prominent theme, which supports the findings from the surveys where participants gave a low rating to manager support. Participants would like to see managers being more involved in the programme so they know what areas have been developed, and would like them to discuss their learning, and help them find ways to apply.

"I think it would have been nice to sit down with my line manager and have the discussion with him – what have I learned, what can I use in my daily work, and how. And we could try it for one month, and then follow it up."

Another prominent theme was the request for a **personal development plan** – a formal way of putting the learning into place and following up on progress.

Less prominent, but still considered to be potentially helpful was **facilitating contact with other participants, providing development and leadership opportunities,** and continuing to work on the **360 results**. Finally, some participants also wanted clarity around **what was expected from them** in terms of their development.

Potential facilitators of transfer

The high scoring factors from the survey identified areas which may facilitate transfer of learning. The strong score of 86% for supervisor sanctions should be viewed with the same caution as that of negative personal outcomes as it is a reflection of the extent to which participants believe their managers would NOT oppose the use of learned skills. Again, perhaps it is unlikely that a manager that has agreed to an individual's participation in a programme would actively oppose use of the learning gained, suggesting that perhaps this factor is not a useful reflection of the work environment's potential for transfer. It does however offer an indication of the support received from managers' for the use of learning.

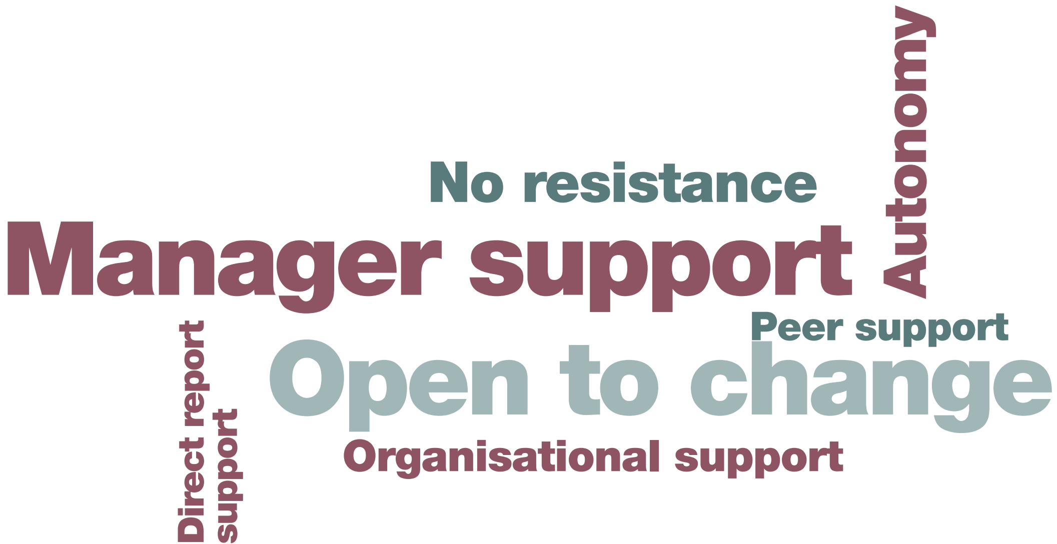
The high score of **78%** for *resistance to change* however, suggests this area facilitates transfer and that participants expected peers, teams and the organisation as a whole to support the use of new techniques and would be willing to engage in change, all of which would encourage the transfer of newly learned skills.

The tag cloud below illustrates the areas that participants found to be facilitators of transfer of learning, and demonstrates support for this high score in this area, as the most prominent theme was openness to change.

Participants felt that their organisations were willing to try new ways of working, and happy to embrace change.

"I think if you have a new way, you know, a new way of looking at something, or you want to try something, I think it's an environment where that is quite welcome."

Reported facilitators of transfer - work environment



Interestingly however, resistance to change was also a prominent theme as a barrier to transfer. Whilst this suggests the group were split in terms of whether or not their organisation is open to change, it does imply that the factor is certainly considered critical to transfer.

The next most prominent theme was manager support. Participants found their line managers were interested in their learning, and supporting the application of that learning.

"My boss is supportive, you know. He's asked what I've been doing, and he's happy to support where I need it."

Again, this finding is at odds with the quantitative data which found low manager support. However, as the quantitative data regarding perceptions of the transfer system was gathered just one week after the programme and the interviews carried out some 6 weeks later, it could be that participants anticipated a lack of support, but found their mangers unexpectedly supportive when they returned to work.

Autonomy was another frequently reported theme. Participants found that having the freedom to try out new ways of working helped them apply the learning.

Some participants also reported that they faced no resistance when attempting to apply their learning. Others felt that organisational support and peer support helped them to apply what they had learned. Less prominent, but still considered helpful, was the support of their direct reports.

The most prominent theme was more responsibility. Participants were given opportunities to contribute more and to use their newly learned skills. Being given new projects to work on that again utilise their learning was also prominent, and therefore it appears that what is critical is the manager providing the employee with opportunities to use what they have learned.

"Giving me new responsibilities and new authority that empower me to act out what we learned on the course."

Less prominent but still considered to be helpful was discussions with manager. Participants reported sharing learning with their managers and discussing ways of applying what they had learned. Finally, the opportunity to continue their development with follow up courses was also referred to as a way in which managers were supporting their employees.

Returning finally to the quantitative scores, the strong score of 78% for personal capacity to transfer suggests that participants expected to have the time, energy and mental space in their work lives to change their ways of working to use the skills they've learned. This again contradicts the qualitative data which found that time was by far the biggest barrier to transferring learning. Again, because of the time difference between the two methods of data collection, it could be that participants anticipated they would have time to apply their learning, but when they returned to the office, the reality of their workloads curbed this expectation.

Ways in which managers are supporting employees

Discussed with manager

New projects

Follow up courses

More responsibility

"My boss, he encouraged me to apply what I have learned."

Work Environment Summary

Area rated as least likely to facilitate transfer

Many expected little feedback or support from managers, but appear to have received that support when they returned to work

This support came in the form of more responsibility, providing opportunities to develop and utilise learning

Majority found lack of time was the main barrier to applying learning, although they hadn't anticipated that this would be an issue

Resistance to change and lack of leadership opportunities also prominent barriers to transfer

Manager support, openness to change and autonomy were considered key facilitators of transfer

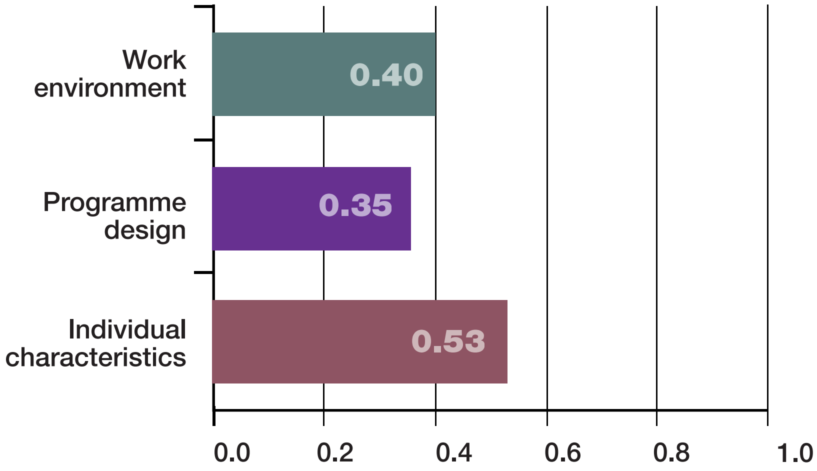
Participants wanted to see more manager support, use of personal development plans, and more development and leadership opportunities

The relationship between the transfer system and reported transfer

One of the aims of the research was to understand the relative influence of the three key areas on reported transfer. As such, a standard multiple regression analysis was performed on the data using reported transfer as the dependent variable and the three super scales (individual characteristics, programme design, and work environment) as the predictor variables, the results of which are reported below. As not all of those who completed the first questionnaire also completed the second, the number of valid participants for this section of the research was reduced to 63 (a response rate of 44%).

A significant model emerged from the analysis[iv], explaining just under a third (30%) of the variance found in reported transfer. This suggests that the transfer system as a whole (individual characteristics, programme design, and work environment combined) does predict reported transfer.

The first chart below illustrates the correlations between the three individual super scales and reported transfer:



Correlation between the three super scales and reported transfer

Significant, positive correlations were found between all three super scales and reported transfer[v], suggesting they are all associated with transfer. Individual characteristics, however, was the only scale with a strong association (greater than 0.5) with reported transfer (0.53).

iv. ($F_{3,62}=8.41$, $p < 0.01$)

v. Individual differences: $r=0.53$, $p<0.01$
Work environment: $r=0.40$, $p<0.01$
Programme design: $r= 0.35$, $p<0.01$

Given that there will be some correlation between the three scales, there will also be some overlap in the influence they bear on reported transfer. This is illustrated in the diagram in Figure 4. The correlations between the three scales and transfer provided in the chart above represent the following areas:

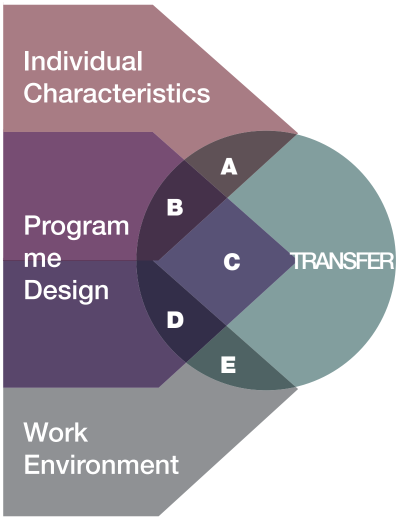
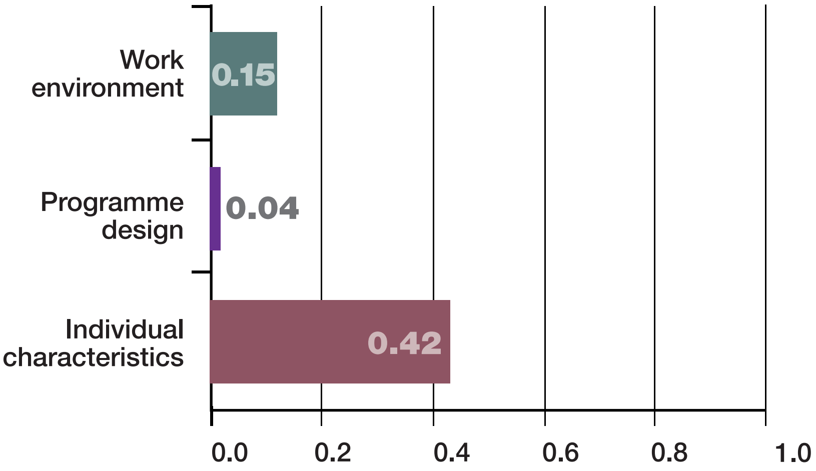


*Figure 4: Diagram showing the **theoretical** correlations between the three scales and transfer*

Correlation between:

- Individual characteristics & transfer = A + B
- Programme design & transfer = B + C + D
- Work environment & transfer = D + E

However, in order to understand the true relative importance of each of the scales we need to determine the unique influence they have on reported transfer – the correlations found in areas A, C and E. These are given in the chart below:

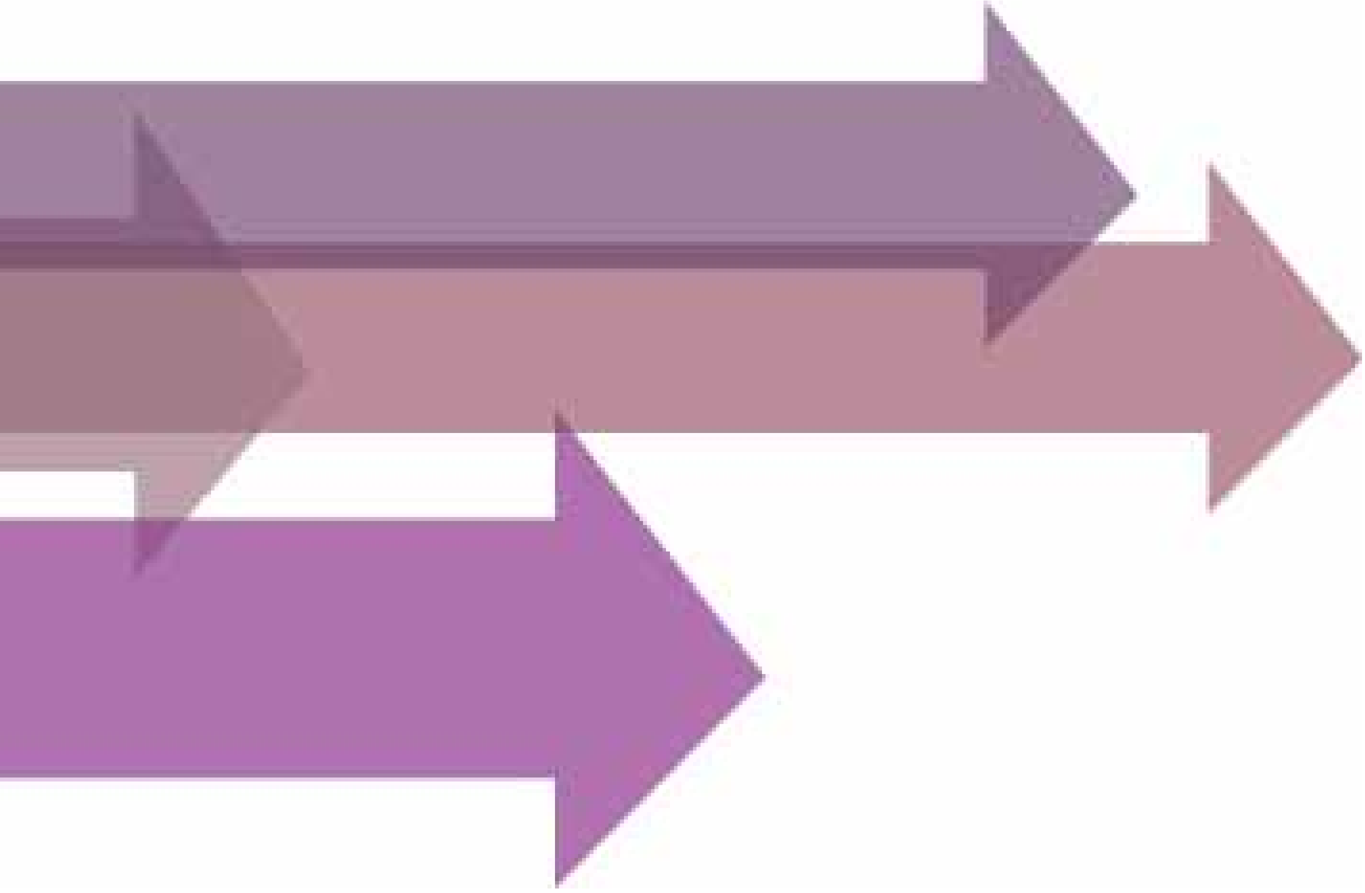


Effect sizes demonstrating the unique influence of the three super scales on reported transfer

0.1	Small effect
0.3	Medium effect
0.5	Large effect

The analysis found that individual characteristics had the strongest unique influence on reported transfer, with a statistically significant medium effect size of 0.42. The work environment and programme design both had only a small influence on transfer with effect sizes of 0.15 and 0.04 respectively, neither of which were statistically significant[vi]. The implications of these findings will be discussed below.

[vi] Individual differences: $\beta = 0.42$, $p < 0.01$
Work environment: $\beta = 0.15$, $p = 0.244$
Programme design: $\beta = 0.04$, $p = 0.24$



CONCLUSION AND RECOMMENDATIONS

This final section explores what might improve transfer of learning from future management development programmes, based on the findings from the current research and the transfer literature.

The intention of the research was to understand the relative influence of the three key areas of the transfer system on transfer, in order to determine how to most effectively intervene to improve transfer of learning from development programmes. Whilst all three areas had a positive relationship with reported transfer, individual characteristics appears to be by far the best unique predictor of reported transfer, and indeed was the only scale with a significant unique contribution.

What this tells us is that in order to make a prediction as to how much an individual will transfer from a development programme, the information we can gather regarding their individual characteristics will tell us much more than the information regarding the programme design or work environment factors combined. Whilst it might naturally follow that our interventions to enhance transfer should be focused on this area, it should be remembered that the factors involved are influenced by factors throughout the system, and as such consideration needs to be paid to appropriate interventions at all three stages to enhance what individuals are able to apply.

Individual characteristics

One explanation for the stronger influence of the area of individual characteristics could be found in Kirwan & Birchall's learning transfer model[10], which suggests that motivation to transfer – an individual characteristic – is central to the transfer process, because it is influenced by so many factors, as referred to above, from self-efficacy and learner readiness, to work environment factors such as peer support and feedback and coaching. Motivation to transfer, according to Kirwan & Birchall, also has a mediating effect on the other central factor in the model – an individual's capacity to transfer, without which transfer will not take place.

Furthermore, as individual characteristics was also given a strong rating from participants in terms of its potential to facilitate transfer, perhaps the area's importance is a function of perceived control – this is the area over which participants feel they themselves have influence, and as such they may view it more positively in terms of its capacity to facilitate transfer. Whatever conclusions we draw, it would certainly appear that this area holds a lot of potential in terms of encouraging transfer of learning from development programmes.

Attitudes to programme attendance

The research found that whilst participants were generally keen to attend the programmes, they were not well informed as to what to expect from the programme and how it linked to their development. It is important therefore, that line managers make this clear to participants prior to them attending programmes, and highlight expected benefits for performance and career, to encourage their engagement in the learning process from the outset.

Clarify programme benefits for performance and career

It is equally important that managers themselves ensure that programme attendance will indeed help to develop their direct reports. Has the organisation conducted an adequate analysis of the needs of their target group? Do they understand what skills are required for current and future roles? Appropriate selection and nomination processes will ensure that programmes are aligned to participants' roles, their objectives and their core competences.

Ensure programmes aligned to participant's roles, objectives and competences

It's also important that organisations position development as reward and recognition of their employees' potential, rather than punishment for lack of skills, particularly if attendance is mandatory. All of which will greatly improve an individual's motivation to learn and to apply.

Position development as reward and recognition

Participants did however anticipate a variety of benefits from the programmes, and as such, the participating organisations would appear to be employing these processes to some extent. However, this could also be by virtue of participants' hindsight at the time they completed the survey, or the company grapevine, as many participants had heard good things from colleagues. This is something which could be encouraged by facilitating contact, either direct or through virtual means, with previous participants to allow them to share their stories and their learning and inspire future participants to engage with the programme from the outset.

Facilitate contact with previous participants

Attitudes to applying learning

Encouragingly, participants were motivated to apply learning, believed it would improve their performance, and reported many success stories.

The fact that many individuals were taking responsibility for applying learning could be viewed in both a positive and negative light. Whilst it is encouraging that they are creating opportunities themselves to apply what they've learned, it does somewhat remove the organisation from any accountability. This could be why many participants found they reverted to type on their return to work. In order to avoid this participants need support and encouragement from their organisations. Formal or informal reports and feedback regarding application of learning, such as personal development plans, as suggested by participants themselves, would discourage individuals from letting the learning go when faced with the pressure of their workloads. This will be explored further below.

Programme design

The research found that programme design had the weakest influence on reported transfer of the three key areas. This is interesting, given that for some time much of the research into transfer had focused on this area. It is also a little disappointing in that this is the area which is likely to be the easiest to shape during programme design.

However, as with the other areas in the system, what happens in the programme design does not only influence transfer directly, but also through its influence on factors across the system.

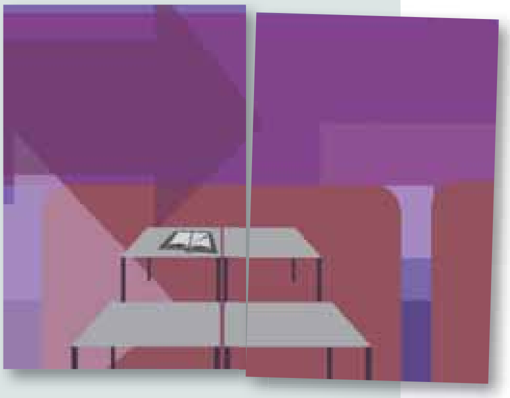
Relevance of content

The research found that whilst the design of the programmes helped participants to apply their learning and the methods used did match the work environment, it appears that the content itself could more accurately reflect job requirements for some participants.

As already discussed, this could be due to the heterogeneous nature of leadership development programme groups, as three times as many considered the material to be relevant to their roles. However, it was supported by participant suggestions as to how to get more from the programmes, and does suggest that programme designers need to work to ensure that the content is relevant and tailored to the requirements of all participants.

Robust diagnostic and development processes during programme design will ensure that content is tailored to the individual organisation, and as discussed above, making sure that participants are appropriately selected and nominated for the programme will also help to ensure that the material covered is relevant to their roles.

Relevance of content is a critical element of programme design as it influences so many aspects of the system. If participants perceive that what they will learn will lead to improvements in their work life, they are more likely to engage in learning, and will be more motivated to apply learning. Indeed, if the content is not relevant to their roles, they will not have the chance to use it back at work and it will soon be forgotten.



Ensure content tailored to the individual organisation and industry

Programme methods

Programmes appear to have been designed to help promote transfer, and indeed participants referred to many aspects of the programmes which they felt helped them to transfer their learning.

Practical sessions

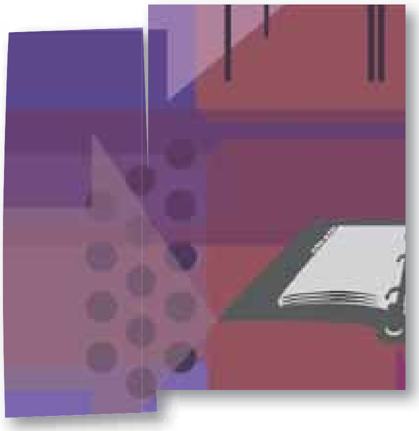
Participants considered these to be particularly helpful in transferring learning, and rightly so, as providing opportunities to practice new skills and behaviours, particularly those which reflect the reality of the individual's role and workplace, will encourage participants to actively reproduce the material. Opportunities to practice also influence the individual characteristic of performance self-efficacy by building confidence to apply learning back at work.

Provide opportunities to practice

Coaching and feedback

Many participants also felt that the coaching, various feedback processes, and opportunities to reflect, helped to transfer learning. These processes build confidence in development of skills by helping participants consolidate learning, identify opportunities to apply learning at work, adjust behaviour where necessary, and highlight possible barriers to transfer and how to overcome them. As such, they should be an integral part of management development programmes.

Incorporate coaching and feedback processes



The work environment

The research found that the work environment had only a weak influence on reported transfer. Given that the work environment is where transfer actually takes place, and the fact that the factors involved have an influence on both an individual's motivation to transfer, and their actual ability to transfer, this finding is a little unexpected. It could be considered somewhat positively however, as this area of the system is likely to be the hardest to change as there are so many stakeholders involved.

Of greater concern however, is the fact that this area was rated the lowest of the three by participants in terms of its likelihood to facilitate transfer. Organisations it would seem, still have much to do if their employees are to maximise transfer of learning from management development programmes.

Feedback and coaching

Although not referred to as a barrier in the interviews, it appears that participants expected to receive little feedback from their organisations regarding use of their learning from development programmes. Feedback is important to transfer because it provides information regarding an individual's performance, which can increase their self-efficacy, and boost confidence to try new things, or help them to identify areas that require development. Feedback also provides opportunities for individuals to discuss barriers to learning, and can help to avoid the pitfall of reverting to type under pressure. Feedback can be formal or informal, so long as the opportunity is presented in which progress and performance can be discussed.

Provide feedback regarding application of learning

Manager support

Whilst the survey found that participants did not expect to receive support from their managers, this was at odds with the qualitative data which was collected some 6-12 weeks later. It would appear therefore, that whilst they expected little support from managers, they did in fact receive that support when they returned to work. However, whilst participants considered manager support to be a strong theme in terms of what helped them to transfer learning, many of them also wanted to see more.

Encouragingly, the research suggests that many managers are already taking practical steps to help individuals transfer their learning, such as increasing responsibility, and providing opportunities for individuals to take on new projects which utilise their newly acquired skills. In addition to this, managers can encourage transfer by allowing autonomy so that individuals can create their own opportunities to use new skills; providing development opportunities; giving feedback on newly learned behaviours; and by taking an active involvement in their member of staff's development. For example drawing up a Personal Development Plan which ensures participation is aligned to their specific performance objectives, and includes a specific action plan detailing how the learning will be applied and continued, will all help to ensure that practical ways to apply learning are identified, and barriers are overcome.

Develop PDPs detailing how learning will be applied, and feed back on progress

Personal capacity to transfer

In terms of having the time and mental space to apply learning, there was once again a discrepancy between the survey data and interviews. As in the former, participants reported that they expected to have the time to apply learning, it could again be that when they actually returned to their jobs they found that work pressures took over and as trying new skills takes time, they instead reverted to old ways or working.

Again, managers can help in this regard by offering support for applying learning, and allowing space in their workloads for them to practice new skills.

Provide time and opportunities for participants to use learning

Resistance to change

Another strong score, resistance to change (which suggests low resistance to change) suggests that participants expected their organisations to encourage the use of new learning. This did however also appear as a prominent barrier to transfer, so many organisations may not be so open to trying new ways of working.

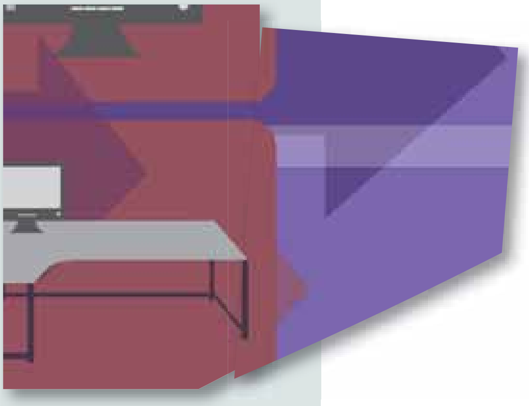
Embracing new ways of working, allowing individuals opportunities to try and to share new skills, and make mistakes, can have a strong influence on whether an individual will attempt, and continue to attempt to apply learning.

Allow individuals to practice new skills and make mistakes

Valued outcomes

Finally, whilst not a prominent theme from the current research, the literature suggests that individuals need to be confident that applying learning will bring positive results. It's important therefore, that organisations demonstrate that learning and using new skills is valued, and support this through stretching assignments and clear policies and rewards for development. This will encourage motivation to apply learning and promote a continuous learning culture so that learning is not regarded as something that stops once the learner leaves the classroom, and transfer becomes a natural part of the learning journey.

Demonstrate learning is valued through policies and rewards for development



In summary

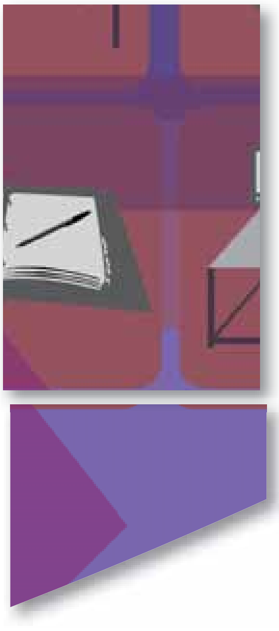
Overall, the management development programmes studied appear to be having a tangible impact on participants' skills acquisition and development. Participants are applying learning and are seeing improvements in their performance as a result of the programmes.

There is scope however, across the entire system, to increase what participants take away from management development programmes and ensure that this translates into sustained improvements in performance back at work.

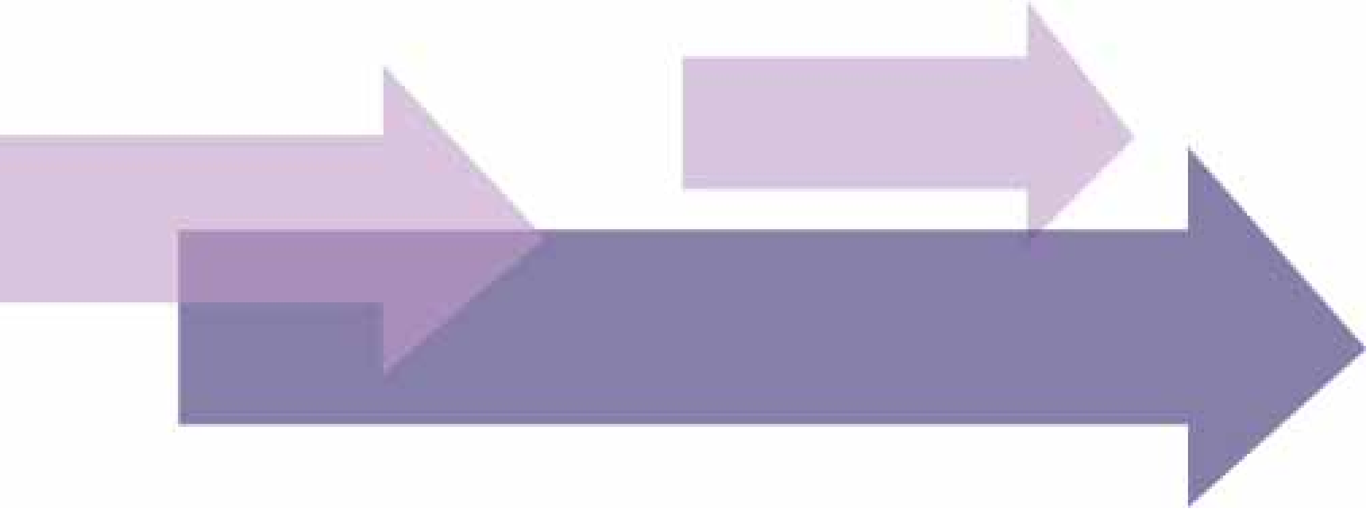
Particular consideration should be paid to ensuring relevance of the material to the individuals through robust tailoring and nomination processes, supporting participants when they return to work, and promoting participant confidence and motivation to engage in and apply learning, if participants and their organisations are to realise the full potential of management development programmes. Interventions which will bear influence on the individual characteristics of participants should receive particular attention.

As is evident however, there is a great deal of overlap across the three areas discussed above, which reveals the complex nature of the transfer system and reflects the myriad ways in which the various factors can influence the transfer of learning. We all have a level of accountability:

- Individuals themselves need to ensure they are clear as to the benefits of the programme, identify ways to apply learning to their roles, take responsibility for applying that learning back in the workplace, and seek feedback regarding new skills
- Programme designers need to ensure that their diagnostic processes are robust resulting in truly tailored programmes with clear links to the workplace, ensure those programmes nurture confidence in the development of skills, and consult with client organisations to encourage their involvement in the programmes and support of participants
- Organisations as a whole need to ensure that programmes are appropriate for the participant, and clarify the benefits. They must support their employees when they return to work, provide opportunities to utilise skills, follow up on progress, and demonstrate that learning is valued through reward and recognition



Such a holistic approach will improve the long term impact of management development programmes, return on investment for organisations, and result in learning that transfers from the classroom to the workplace.



REFERENCES

1. Adler, P.S., & Kwon, S.W. (2002). Social capital: prospects for a new concept. *Academy of Management Review*, 27(1), 17-4.

2. Reade Q. And Thomas, D. (2004) Critics question value of leadership training. *Personnel Today*, 12 October 2004.

3. *Ken Blanchard Companies annual Corporate Issues Survey*, The (2010), www.trainingreference.co.uk, 09 April 2010.

4. Duke CE (2009) *Learning and Development in 2011: A Focus on the Future; Duke CE's Client Study*, Duke Corporate Education.

5. Curry, D.H., Caplan, P., & Knuppel, J. (1994). Transfer of training and adult learning (TOTAL). *Journal of Continuing Social Work Education*, 6(1), 8-14.

6. Saks, A.M., & Belcourt, M. (2006). An investigation of training activities and transfer of training in organisations. *Human Resource Management*, 45 (4), 629-48.

7. Ford, J.K., & Weisbein, D.A. (1997). Transfer of training: an updated review and analysis. *Performance Improvement Quarterly*, 10:2, 22-41.

8. Baldwin, T.T., & Ford, J.K. (1988). Transfer of training: a review and directions for future research. *Personnel Psychology*, 41, 63-105.

9. Holton, E.F. III (1996). The flawed four level evaluation model, *Human Resource Development Quarterly*, 7, 5-21

10. Kirwan, C., & Birchall, D. (2006). Transfer of learning from management development programmes: testing the Holton model. *International Journal of Training & Development*, 10:4, 252-68.

11. Holton, E.F. III, Bates, R.A., & Ruona, W.E. (2000). Development of a generalized Learning Transfer System Inventory. *Human Resource Development Quarterly*, 11, 4, 333-60.

12. Chiaburu, D.S., & Marinova, S.V. (2005). What predicts skill transfer? An exploratory study of goal orientation, training self-efficacy and organizational supports. *International Journal of Training and Development*, 9:2, 110-23.

13. Chiaburu, D.S., & Tekleab, A.G. (2005). Individual and contextual influences on multiple dimensions of training effectiveness. *Journal of European Industrial Training*, 29, 604-26.

14. Devos, C., Dumay, X., Bonami, M., Bates, R., & Holton III, E. (2007). The Learning Transfer System Inventory (LTSI) translated into French: internal structure and predictive validity. *International Journal of Training and Development*, 11:3, 181-99.

15. Scaduto, A., Lindsay, D., & Chiaburu, D.S. (2008). Leader influences on training effectiveness: motivation and outcome expectation processes. *International Journal of Training and Development*, 12:3, 158-70.

16. Velada, R., Caetano, A., Michel, J.W., Lyons, B.D., & Kavanagh, M.J. (2007). The effects of training design, individual characteristics and work environment on transfer of training. *International Journal of Training and Development*, 11:4, 282-94.

17. Saks, A.M., & Haccoun, R.R. (2007). *Managing Performance through Training and Development*, 3rd ed., Nelson, Scarborough, ON.

18. Bates, R.A., Holton, E.F.III, Seyler, D.L., & Carvalho, M.A. (2000). The role of interpersonal factors in the application of computer-based training in an industrial setting. *Human Resource Development International*, 3, 19-42.

19. Colquitt, J.A., LePine, J.A., & Noe, R.A. (2000). Toward an integrative theory of training motivation: a meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology*, 85, 678-707.

20. Reber, R.A., & Wallin, J.A. (1984). The effects of training, goal setting, and knowledge of results on safe behaviour: a component analysis. *Academy of Management Journal*, 27, 544-60.

21. Tracey, J.B., Tannenbaum, S.I., & Kavanagh, M.J. (1995). Applying trained skills on the job: the importance of the work environment. *Journal of Applied Psychology*, 80, 239-52.

22. Brown, T.C., & McCracken, M. (2009). Building a bridge of understanding: how barriers to training participation become barriers to training transfer. *Journal of European Industrial Training*, 33 (6). 492-512.

23. Rivera, R.J., & Paradise, A. (2006). *State of the Industry in Leading Enterprises*. Alexandra VA: ASTD Press.

24. Balaguer, E., Cheese, P., & Marchetti, C. (2006). *The High Performance Work Study 2006*. Accenture. Available at http://www.accenture.com/Global/Research_and_ Insights/By_Subject/Human Resources_Mgmt/default.htm (accessed 25 January 2007).

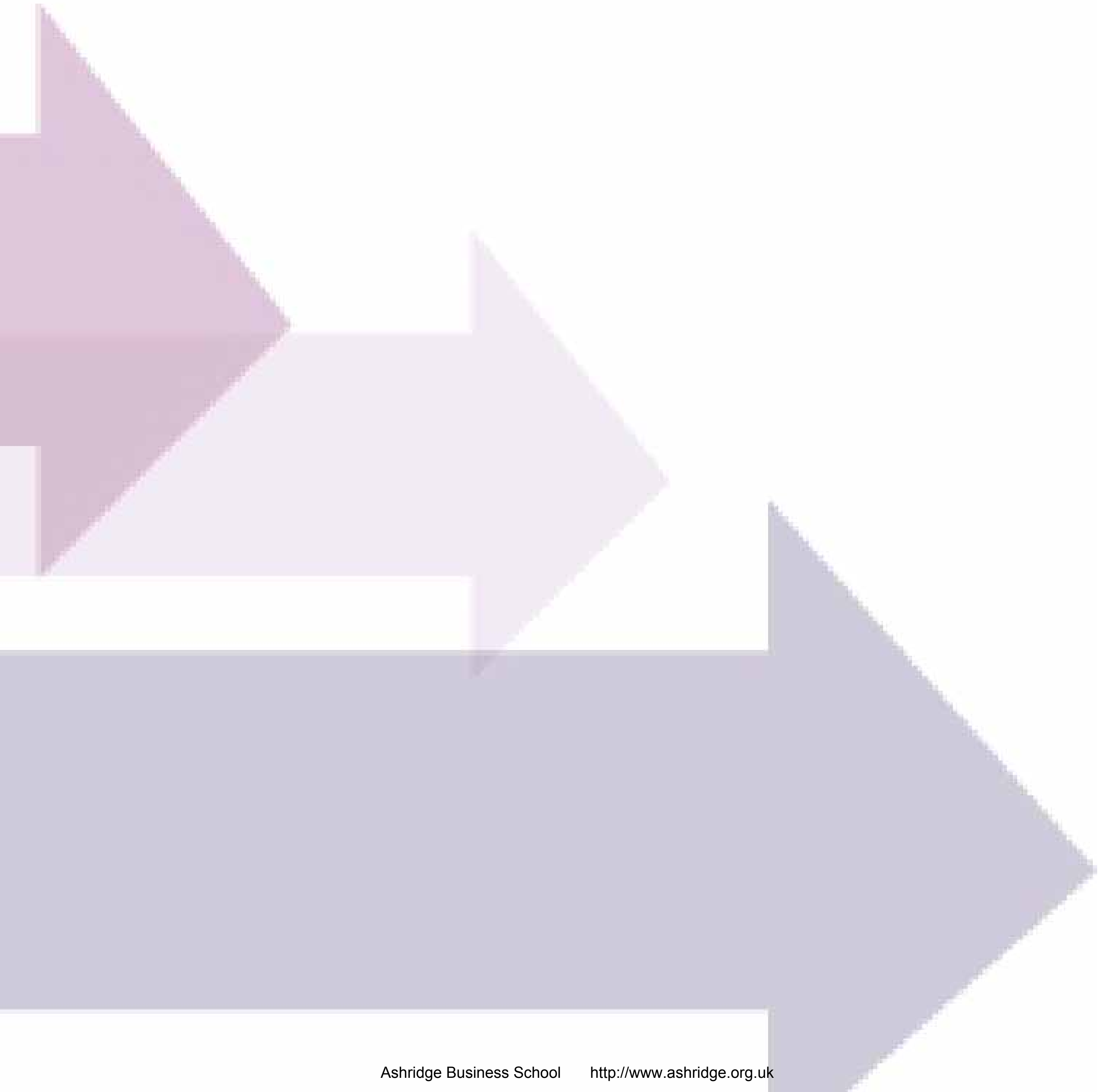
25. Hutchins, H.M., & Burke, L.A. (2007). Identifying trainers' knowledge of training transfer research findings – closing the gap between research and practice. *International Journal of Training & Development*, 11(4), 236-64

26. Holton, III & Bates, R.A. (2008). *The Learning Transfer System Inventory*, version 3.0.

27. Facteau, J.D., Dobbins, G.H., Russell, J.E.A., Ladd, R.T., & Kudisch, J.D. (1995). The influence of general perceptions of training environment on pre-training motivation and perceived training transfer. *Journal of Management*, 21(1). 1-25.

28. Xiao, J. (1996). The relationship between organizational factors and the transfer of training in the electronics industry in Shenzen, China. *Human Resource Development Quarterly*, 7, 55-73.

29. Noe, R.A. (1986). Trainees' attributes and attitudes: neglected influences on training effectiveness. A*cademy of Management Review*, 11, 736-49.



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