Participation in three types of development activities is examined among salaried employees of a firm that significantly increased access to development after a series of layoffs in the late 1990s. Analyses of survey and archival data representing 667 employees show that on-the-job training was positively related to organisational commitment and negatively related to intention to turnover. Participation in tuition-reimbursement, which provides more general or marketable skills, was positively related to intention to turnover. However, intention to turnover was reduced after earning a degree through tuition-reimbursement if employees were subsequently promoted. Implications for an employment relationship based on ‘employability’ are discussed.

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Much has been written about changes in the relationship between employees and firms over the last few years (Byron, 1995; Bagshaw, 1997; Rousseau, 1997; Hallier and Butts, 1998; Sullivan, 1999; Cappelli, 2000; Baruch, 2001; Lawler, 2001; Guest, 2004). Since the early 1990s the common wisdom has been that the mergers, re-engineering, and downsizing that are now commonplace have led to uncertain job security for employees. This situation has created problems for firms as it undermines the traditional employment relationship in which employees exchange commitment and loyalty to a firm for a credible promise of long-term employment. Because an implicit promise of job security is no longer possible, firms need new ways of retaining workers and inspiring commitment among employees.

Some companies and scholars have advocated that ‘employability’ might supplant long-term job security as the basis for reciprocal commitment from employees (Fagiano, 1993; Waterman et al., 1994; Iles et al., 1996; Estienne, 1997; Galunic and Anderson, 2000; Craig et al., 2002). For companies that cannot reasonably offer job security, employability in practice means increased investments in company-financed employee development to guarantee that employees’ skills are up to date and marketable if they are unexpectedly out of work. The assumption is that if the firm can reduce the uncertainty of finding another job if needed, then employees are more likely to feel committed and remain with the organisation (Galunic and Anderson, 2000).
This article examines the relationship between participation in employee development, organisational commitment and intention to turnover among 667 employees in a high-technology manufacturing firm that had instituted a series of ‘employability’ policies in the mid 1990s. Following a series of layoffs the firm significantly increased the number of internal course offerings and on-the-job training programmes. They also instituted a 100 per cent tuition-reimbursement policy that paid bonuses up to $10,000 for completing a university degree. Company leadership stated that, in addition to a desire for well-trained employees, this programme was a direct response to the reduction in job security across the company. In 1999, 11.7 per cent of salaried employees were downsized and one of the company’s facilities was in the process of closing during the study period. In 2000, the CEO stated the purpose of these policies:

We cannot guarantee anyone a job, but we are nonetheless obliged to provide employees reasonable opportunities to re-establish themselves, ideally on more favourable conditions, in the event of job loss. (Trapp, 2000, p. B2)

To examine these policies in action I draw on two divergent sets of literature and test participation in three types of company-sponsored development activities. Employee development research from management and psychology uses a social exchange model of organisations and generally assumes that skill development and the opportunity to take training are viewed by employees as benefits and contribute to an employee’s organisational commitment and willingness to remain with the firm (Gaertner and Nollen, 1989; Nordhaug, 1989; Birdi et al., 1997; Noe et al., 1997; Tsui et al., 1997; Meyer and Smith, 2000; Bartlett, 2001; Tansky and Cohen, 2001). Labour economics, on the other hand, predicts that workers with upgraded general skills are likely to turnover unless their wages are increased (Becker, 1965; Lynch, 1991; Krueger and Rouse, 1998; Loewenstein and Spletzer, 1999; Klein, 2001). Using these contrasting perspectives, I predict that participation in on-the-job training, company classes and tuition-reimbursement courses is positively related to affective commitment and negatively related to intention to turnover. At the same time, earning a degree through tuition-reimbursement is predicted to be related to increased intention to turnover unless the employee is promoted afterwards. Implications for an employment relationship based on employability are then discussed.

LITERATURE REVIEW AND HYPOTHESES

Employability policies are intended to retain committed employees when job security cannot be guaranteed. Organisational commitment and intention to turnover are important because these are the implied goals of employability policies and will ultimately determine their long-term viability. Organisational commitment is the strength of an individual’s identification with and attachment to an organisation (Porter et al., 1974: 604). Allen and Meyer (1996) identified commitment as taking three forms: affective, normative and continuance. Affective organisational commitment is examined in this study and has been linked to work performance (O’Reilly and Chatman, 1986; Randall, 1990), customer satisfaction (Bowen and
Schneider, 1999) and turnover (Blau and Boal, 1987; Huselid and Day, 1991; Cohen and Hudecek, 1993; Somers, 1995).

Intention to turnover is the willingness of employees to leave the company for another job and their intention to begin searching for a new job (Mobley et al., 1978; Tett and Meyer, 1993). Although a variety of withdrawal cognitions and job search behaviours have been examined in previous research, recent empirical evidence shows that intention to turnover is best represented by a single dimension (Bozeman and Perrewe, 2002). Intention to turnover is the most predictive variable of actual turnover in firms (Hom et al., 1992; Griffeth et al., 2000).

**Development and employability**

In the past, employment practices which rewarded length of service with periodic promotions were assumed to lead to affective commitment and retention (Gaertner and Nollen, 1989). This coincided with a careers literature that focused on stages or cycles of promotion within a firm (Hall, 1986; London and Mone, 1987; Mirvis and Hall, 1994; Hall and Mirvis, 1996). Today these bases of employee commitment have been undermined by the widespread perception that skilled employees are likely to work for many different organisations over their careers. This may be voluntary as employees develop ‘boundaryless careers’ by changing jobs and firms more frequently (Arthur, 1994; Arthur and Rousseau, 1996; Sullivan et al., 1998; Sullivan, 1999; Eby et al., 2003). For a great number of companies, however, this situation is involuntary as a history of layoffs prevents the company from any credible promise of long-term job security.

Some companies and scholars have promoted employability as an alternative employment relationship (Fagiano, 1993; Waterman et al., 1994; Iles et al., 1996; Estienne, 1997; Galunic and Anderson, 2000; Craig et al., 2002). Employability is a concept that emerged through the 1990s along with a growing perception among employees that they cannot count on their employers for long-term employment (Baruch, 2001). Employability is a promise to employees that they will have the skills to find new jobs quickly if their jobs end unexpectedly. The notion is that employers offer individuals the opportunity to develop skills that make them broadly employable as a replacement for job security. Under this implicit agreement, employability takes the place of long-term job security and employees are then free to develop organisational commitment and willingness to remain with the firm (Waterman et al., 1994; Craig et al., 2002). In practice, employability means increased investments in all forms of company-financed development with a particular emphasis on providing general or marketable skills that are in demand at other firms (Baruch, 2001; Craig et al., 2002). In fact, there are widespread examples of companies increasing investments in development under the assumption that it aids in retaining employees (e.g. ASTD, 1999).

Whether an employment relationship based on employability is sustainable ultimately depends on whether employees who participate in these programmes and gain marketable skills are more committed and willing to remain at a firm without a credible promise of job security. To examine the long-term viability of employability policies, I first review two different perspectives and streams of research on employee development, commitment and retention.
Development as a benefit

Multiple studies have found that development affects employee attitudes (Birdi et al., 1997; Galunic and Anderson, 2000; Bartlett, 2001; Tansky and Cohen, 2001), and organisational commitment is found in several models of development outcomes (Feldman, 1989; Tannenbaum et al., 1991; Birdi et al., 1997; Noe et al., 1997). This literature is generally based on a social exchange model of organisations in which an individual will seek to respond in kind when he or she receives something of value. Nordhaug (1989) showed that workers perceive the provision of training to be a benefit offered by their employers along with pay and other fringe benefits. Accordingly, theories of employee development generally assume that employees who participate will respond with positive attitudes towards the firm (e.g. Noe et al., 1997). In fact, research has shown that employee satisfaction with development opportunities in general is related to organisational commitment (Meyer and Smith, 2000; Bartlett, 2001; Blau et al., 2001; Tansky and Cohen, 2001).

Studies of actual development participation have also found positive relationships between development and employee attitudes. For example, Bartlett (2001) found that the number of training events experienced by nurses in five hospitals was positively related to affective commitment. Birdi et al. (1997) analysed training time spent in four categories of development and found organisational commitment was positively correlated with prior participation in work-based development and required training courses. Taken together this research suggests that employee development activities including company classes, on-the-job training and tuition-reimbursement opportunities are likely to be seen as benefits provided by the company and are positively related with organisational commitment.

H1: Participation in company training classes, formal on-the-job training and tuition-reimbursement classes are positively related to organisational commitment.

Participation in company training, on-the-job training and tuition-reimbursement should also affect turnover intentions if employees have greater access to development than they would have at other firms. Turnover research has traditionally focused on job satisfaction and job alternatives as the two main factors predicting turnover (Mobley et al., 1979; Steers and Mowday, 1981; Bluedorn, 1982; Lee and Mowday, 1987; Hom and Kinicki, 2001). Independent of any positive relationship with employee attitudes, offering particularly good employee development benefits should make current jobs more attractive compared to other firms. Research shows that employees are less likely to leave a firm if it means giving up a significant benefit (Shaw et al., 1998; Mitchell et al., 2001). For example, Cappelli (2004) found that firms that offer tuition-reimbursement programmes reported lower turnover compared to similar companies without tuition-reimbursement programmes. This suggests that participation in development activities should also lead to reduced intention to turnover.

H2: Participation in company training classes, formal on-the-job training and tuition-reimbursement classes are negatively related to intention to turnover.

While the research from management and psychology focuses on employee development as a benefit provided by the firm, there is a second set of literature that
provides a different perspective on programmes that provide employees with skills that are in demand at other firms. Research and theory in labour economics assumes that providing marketable skills to employees, such as through tuition-reimbursement, increases job alternatives and turnover (Becker, 1965; Lynch, 1991; Krueger and Rouse, 1998; Loewenstein and Spletzer, 1999).

**Development as human capital**

Becker (1965) defined ‘general’ skills as those that increase the productivity of labour across all companies and ‘specific’ skills as those that increase the productivity of labour in a single company. Human capital theory suggests that developing general skills that are useful across a wide range of firms increases external job opportunities and the likelihood that employees will market their skills elsewhere (Becker, 1965; Mincer, 1988; Lynch, 1991). Research in labour economics shows that tuition-reimbursement, company classes and on-the-job training are significantly different in terms of both the types of skills that are developed and how prospective employers perceive them. Loewenstein and Spletzer (1999) conclude, based on employee surveys, that company training is the most specific type of training, college-based courses the most general, and company-sponsored seminars fall somewhere in between. Lynch (1991) found that prospective employers view formal company training as highly firm-specific and training received from schools through tuition-reimbursement as significantly more general. This suggests that employees are likely to see the skills developed through tuition-reimbursement as significantly more marketable than those gained through on-the-job training or company classes.

However, the marketability of those skills is directly related to whether or not the employee actually earns a degree. Research into the relationship between education and wages shows that earning a degree is different from simply attending class because of the signalling power of the credential to potential employers (Spence, 1974; Acemoglu and Pischke, 1998; 1999). The importance of earning that credential for potential wage growth and career advancement means that the marketability of the skills gained through tuition-reimbursement accrues upon graduation (Spilerman and Lunde, 1991). Once employees earn a degree through tuition-reimbursement, they have new skills and credentials that may not be used in their current positions and are desired by other firms. To find the best return on their new skills employees may have to look outside their current organisations regardless of their affective attachment. This suggests that earning a degree through tuition-reimbursement has a different relationship with intention to turnover than taking classes without earning a degree.

Turnover studies often include education as a control variable (e.g. Trevor, 2001) and assume that it increases turnover opportunities for employees. However, the evidence for the college degrees and turnover is mixed. While Loewenstein and Spletzer (1999) found no link between participation in school or college-based classes outside work and turnover rates, Lynch (1991) found that employees who participated in some form of company-sponsored classes outside the workplace were more likely to turnover. More recently, Benson et al. (2004) found that employees were more likely to turnover when they earned graduate degrees through tuition-reimbursement. Some companies have recognised the potential for losing employees once they have earned a degree through tuition-reimbursement and have
instituted policies that employees must remain with the firm for a period of time or pay the cost of the tuition-reimbursement. However, a 1999 survey found that only 16 per cent of firms offering tuition-reimbursement actually use contractual ‘handcuffs’ to keep employees (Hewitt Associates, 1999). Assuming that a firm does not have policies to keep employees, earning a degree through tuition-reimbursement should therefore be positively related to intention to turnover.

**H3:** Earning a degree through tuition-reimbursement is positively related to intention to turnover.

Because earning a degree may increase the opportunities for employees to leave the firm, this poses a serious problem for companies seeking to use tuition-reimbursement programmes as a means to retain employees. However, the attractiveness of other jobs also depends on how the organisation responds when an employee earns a degree. Benson et al. (2004) found that receiving a promotion after earning a degree through tuition-reimbursement greatly reduced the likelihood of turnover. This is most likely because employees often seek out development activities in order to advance their careers (Noe and Wilk, 1993; Maurer and Tarulli, 1994; Fujita-Starck, 1996). If employees are able to advance their careers within the organisations that provided the degree, then the pressure to market the new skills should be alleviated. Therefore I predict that employees who are promoted after earning a degree should report lower intention to turnover than an employee who earns a degree and is not subsequently promoted.

**H4:** Employees who earn a degree through tuition-reimbursement and are subsequently promoted report lower intention to turnover than employees who earn a degree through tuition-reimbursement and are not promoted.

These hypotheses taken together argue that participation in development activities through an employability programme acts on employees as both a benefit provided by the firm and a skill set that employees expect to use and be compensated for. As a benefit, participation in all types of development is predicted to lead to commitment and reduced intention to turnover. However, participation in general skills development, such as through tuition-reimbursement, is predicted to have an additional impact on employees through the skills gained. When employees earn degrees through tuition-reimbursement they will seek out new jobs unless they are promoted in order to see a return on their new skills and credentials.

**METHODS**

**Sample and procedure**

Participation in three types of employee development is examined using archival and survey data from a sample of employees in a large high-technology manufacturing firm. All full-time, salaried technical employees in two separate business units were surveyed. A total of 1,983 engineers and technical managers were surveyed in June 2000. Surveys were returned from 773 employees for a response rate of 38.9 per cent. While the vast majority (91 per cent) of the 773 survey respondents worked at the company’s headquarters facility, there were 70 who
worked at different locations around the country. Because these employees had much less access to formal employee development than those working at the headquarters location, they were excluded from the sample. In addition, because participation in employee development was measured over the 12 months preceding the survey, 14 employees who had worked for the company for less than one year were excluded from the sample. Finally, 12 employees over the age of 65 were excluded along with 10 cases that had missing data. The final sample analysed consisted of 667 full-time salaried employees. These survey data were matched with electronic personnel records and records on the firm’s tuition-reimbursement programme for the period January 1996 to June 2000.

Separate sets of ordinary least squares regressions are estimated using the self-report and archival measures of development participation to test whether company classes, on-the-job training and tuition-reimbursement are related to organisational commitment and intention to turnover. The first set of regressions predict organisational commitment and intention to turnover using self-report survey data on participation in three different development activities. The second set of regressions use archival data on tuition-reimbursement participation, earning a degree, and receiving a promotion after earning a degree. Both sets of analyses use the same control variables: tenure, education, managerial job, business unit, salary level, salary increase over the past year and rate of promotions received.

Measures

Self-reported development time Survey respondents reported the number of days spent in company training classes, tuition-reimbursement courses and formal on-the-job training over the previous 12 months. A quarter (24.1 per cent) of employees participated in tuition-reimbursement and a third (34.5 per cent) participated in on-the-job training over a 12-month period. Company training classes were the most common development activity, with 82.3 per cent of employees participating. Examination of the three self-report measures revealed that the distributions for each of the development activities had several large outlier observations. For example, some individuals reported spending more than 10 times the average amount of time in tuition-reimbursement courses, company-sponsored classes and on-the-job training. To deal with this problem, each of these variables was normalised using a natural log (ln) transformation.

Tuition-reimbursement participation Participation in tuition-reimbursement was also measured from the company’s archival records 1996–2000. Data on whether the employee took classes without earning a degree or earned a degree and received the bonus award from the company were coded as dummy variables. The archival data measured participation over 54 months. During the study period, 40.2 per cent of employees participated in tuition-reimbursement without earning a degree and 9.3 per cent earned a degree through the company. The tuition-reimbursement programme paid all educational expenses and gave employees a few hours a week off to pursue any degree or professional development programme regardless of their current job requirements. When employees completed a degree they received a $10,000 bonus in stock for bachelor or graduate degree and $5,000 for an associate degree. The bonus was immediately vested and the programme benefits were not
tied to any retention period. However, the tuition programme was not integrated into career planning and participation was not tied to a promotion or promise of advancement. Although employees were permitted to pursue any type of degree, all but one of the degrees earned by employees included in the sample were in engineering, business or computer science.

**Promotions** Promotions were coded directly from the personnel records provided by the company and are measured as a change in pay grade. During the period examined, 43.3 per cent of the employees surveyed had been promoted at least once and 9.5 per cent of employees were promoted more than once. Promotions were measured for the four and a half years that preceded the survey administration. Following a technique used by Trevor *et al.* (1997) the number of promotions received was divided by the number of years of tenure with the company or the four and a half years for which data were available, whichever was smaller. Time is taken into account because employees who were hired during that four and a half year period (approximately 35 per cent of the respondents) had less time during which to be promoted.

This same technique was used to code a second variable which indicates the rate that employees received promotions after they earned degrees through the company. This was done by taking the number of times that employees were promoted after earning a degree and dividing by the number of years elapsed between the degree and June 2000. The rate of promotion (or promotions per year) after earning a degree was chosen since the employees who earned degrees earlier during the four and a half years for which data were available had more time in which to be promoted. A total of 18 people were promoted after earning degrees through the company’s tuition-reimbursement programme 1996–2000, which was 2.6 per cent of total employees and 29 per cent of those who earned degrees. Three of those 18 were promoted twice after the degree. Those promoted after earning a degree averaged 0.51 promotions per year.

**Organisational commitment** Organisational commitment was measured in the employee survey using five-point Likert scale items. Several previous studies of employee development have used items from Porter *et al.*’s (1974) commitment scale to measure only affective commitment (Gaertner and Nollen, 1989; Birdi *et al.*, 1997; Tansky and Cohen, 2001). Six items were selected from Porter *et al.*’s (1974) scale, including ‘I am extremely glad to have chosen this organisation to work for over other organisations’ and ‘For me this is the best of all organisations for which to work’. Cronbach’s alpha for organisational commitment was 0.87. Several studies have found that Porter *et al.*’s (1974) scale contains several items that commonly cross-load with intention to stay or intention to turnover measures (Angle and Perry, 1981; Ferris and Aranya, 1983; Bozeman and Perrewe, 2002). To overcome this problem, only items that focus on affective attachment were selected.

**Intent to turnover** Intention to turnover is measured using a single item in which respondents indicated the extent to which they agreed with the statement ‘I plan to look outside my organisation for a new job within the next year’. This item was written for this survey, and is similar to the commonly used intention to leave
measure ‘What are the chances you will quit your job in the next 12 months?’ (Hom et al., 1984; Hom and Griffeth, 1991; Johnston et al., 1993; Davy et al., 1997).

**Tenure** Tenure is coded from personnel records as the number of years between the employee’s original start date and June 2000. After removing employees with less than one year of tenure and employees over the age of 65, tenure ranged from one year to 46.7 years with a mean of 14.1 years with the company. Organisational tenure was included because it predicts participation in development activities (Kozlowski and Huerts, 1987; Kozlowski and Farr, 1988), organisational commitment (Mathieu and Zajac, 1990) and turnover intentions (Griffeth et al., 2000).

**Education** Employees reported education level through the survey that was measured using a seven-point scale with high school education as one and increasing through a PhD. Because engineers constituted the largest portion of the sample, the educational attainment of the respondents was relatively high. Nearly half (48.6 per cent) of the employees held four-year college degrees, compared with 14.5 per cent who had high school or two-year degrees. A third (36.9 per cent) of the employees held master’s degrees or higher. Education was included because it influences whether employees participate in voluntary development activities (Kozlowski and Farr, 1988; Frazis et al., 1995).

**Manager** A dummy variable was coded for manager (1) vs non-manager (0) by using the job grade held by the employee in June 2000 according to personnel records provided by the company. Fifty-nine per cent of the respondents were managers. Manager status was included since managers tend to have greater access to training and development activities and fewer opportunities for promotion (Carnevale et al., 1990).

**Business unit** Salaried technical employees with similar backgrounds and performing similar work in two different units were surveyed. A dummy variable was used to control for differences among the units. The first business unit, which was responsible for manufacturing engineering, represented 32 per cent of the respondents and was coded 1. The second unit, which was responsible for research and development, represented 68 per cent of the respondents and was coded 0.

**Salary** Salary level is defined as the salary of the employee in 2000 when the survey was administered. Mean salary level for the sample was $70,080. Salary growth was defined by taking the difference between the employee’s 1996 or initial hiring salary and the last observed salary in 2000 divided by the length of time between the two salaries. The average time between the two salary observations was 3.7 years and the mean annual salary growth was $2,632 for all employees. Salary level and growth are included to control for the potential effects of wage growth on commitment and intention to turnover (Trevor et al., 1997).

**RESULTS**

Initial analysis of survey responses from employees provides some evidence that employees view the developmental content of tuition-reimbursement classes,
on-the-job training and company training classes differently in terms of how useful they are to an employee’s marketability for other jobs. Employees were asked to rate their participation on a number of different development activities in terms of ‘usefulness to your future marketability’ with a five-point scale. Employees rated for-credit courses (tuition-reimbursement) as significantly more useful than structured on-the-job training ($t = 4.08, p < 0.001$) and company classes ($t = 6.1, p < 0.001$). Figure 1 illustrates the average ratings of the three development activities.

Descriptive statistics and correlations are presented in Table 1. Table 2 details the results of regressions using self-reported data for the three development activities. The regression predicting organisational commitment was significant ($F = 4.495, p < 0.001$) and explained 6.4 per cent of variance. On-the-job training was significant ($\beta = 0.161, p < 0.001$) and positively related to commitment. Both company training classes and tuition-reimbursement, however, showed no significant relationship with organisational commitment. Hypothesis 1 was therefore only partially supported.

The second regression predicting intention to turnover was significant with 30.5 per cent of variance explained ($F = 27.519, p < 0.001$). Coefficients for on-the-job training ($\beta = -0.085; p < 0.05$) and tuition-reimbursement classes ($\beta = 0.071; p < 0.05$) were significant but with opposite signs. The finding that on-the-job training is negatively related to intention to turnover supports Hypothesis 2. Contrary to Hypothesis 2, however, employees who participated in tuition-reimbursement reported higher intention to turnover than those who did not participate or took fewer classes.

Table 3 repeats the analyses using archival tuition-reimbursement participation data. In the first regression, taking classes and earning a degree through tuition-reimbursement were not significantly related to organisational commitment.

**FIGURE 1** Employee ratings of development usefulness

<table>
<thead>
<tr>
<th>Future Marketability</th>
<th>College Courses*</th>
<th>Company Training Classes</th>
<th>On-the-Job Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3.79</td>
<td>3.03</td>
<td>3.02</td>
</tr>
</tbody>
</table>

*Employees were asked to evaluate development activities in terms of ‘Their usefulness to your future marketability’. Responses were given on a five-point scale from ‘Not useful at all’ to ‘Extremely useful’.

College courses were rated significantly more useful than company classes ($t = 6.104; p < 0.001$) and on-the-job training ($t = 4.079; p < 0.001$).
<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Organisational commitment</td>
<td>667</td>
<td>3.22</td>
<td>0.73</td>
<td>-</td>
<td>2</td>
<td>3.45</td>
<td>0.50</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Plan to look outside in next year</td>
<td>667</td>
<td>2.70</td>
<td>1.21</td>
<td>-0.50</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>No. of days tuition-reimbursement</td>
<td>667</td>
<td>8.20</td>
<td>21.85</td>
<td>-0.03</td>
<td>0.12</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>No. of days structured on-the-job training</td>
<td>667</td>
<td>3.53</td>
<td>16.95</td>
<td>-0.15</td>
<td>-0.12</td>
<td>0.03</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>No. of days company classes</td>
<td>667</td>
<td>6.92</td>
<td>8.01</td>
<td>0.11</td>
<td>-0.07</td>
<td>0.02</td>
<td>0.21</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>Earned degree</td>
<td>667</td>
<td>0.09</td>
<td>0.29</td>
<td>-0.02</td>
<td>0.06</td>
<td>0.12</td>
<td>-0.05</td>
<td>-0.03</td>
<td>-</td>
<td></td>
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<tr>
<td>7</td>
<td>Took classes</td>
<td>667</td>
<td>0.40</td>
<td>0.49</td>
<td>-0.03</td>
<td>0.06</td>
<td>0.21</td>
<td>-0.02</td>
<td>0.07</td>
<td>-0.26</td>
<td>-</td>
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<tr>
<td>8</td>
<td>Promotions</td>
<td>667</td>
<td>0.14</td>
<td>0.19</td>
<td>0.03</td>
<td>0.11</td>
<td>0.18</td>
<td>0.06</td>
<td>0.00</td>
<td>0.13</td>
<td>0.09</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Salary level (000s)</td>
<td>667</td>
<td>70.08</td>
<td>19.28</td>
<td>-0.07</td>
<td>0.02</td>
<td>-0.13</td>
<td>-0.08</td>
<td>-0.07</td>
<td>-0.03</td>
<td>-0.06</td>
<td>-0.19</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Salary increase</td>
<td>667</td>
<td>2.63</td>
<td>2.51</td>
<td>0.05</td>
<td>0.03</td>
<td>0.07</td>
<td>0.08</td>
<td>0.05</td>
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<td>0.06</td>
<td>0.46</td>
<td>0.14</td>
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<td>11.58</td>
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<td>-0.09</td>
<td>-0.13</td>
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<td>1.46</td>
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<td>0.06</td>
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<td>0.02</td>
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<td>0.08</td>
<td>-0.03</td>
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<td>13</td>
<td>Manager</td>
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<td>0.49</td>
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<td>0.03</td>
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<td>-0.12</td>
<td>-0.15</td>
<td>0.76</td>
<td>0.08</td>
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</table>

Note: Values greater than 0.07 are significant at $p < 0.05$. Values greater than 0.13 are significant at $p < 0.0001$. 
This repeats the results from the survey data and does not support Hypothesis 2. In the second regression predicting intention to turnover, however, earning a degree was estimated to have a positive and significant ($\beta = 0.088; p < 0.05$) relationship with intention to turnover. The rate of promotion following a degree was estimated to have a significant ($\beta = -0.081; p < 0.05$) and negative relationship with intention to turnover. This suggests that promoting an employee within a year after they earn a degree through tuition-reimbursement negates the positive relationship that earning a degree has with intention to turnover. The significance of this variable was particularly strong given that very few employees in the total sample earned degrees through tuition-reimbursement and were promoted afterwards.

<table>
<thead>
<tr>
<th>TABLE 2 Regression analyses for survey data</th>
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<tr>
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<tr>
<td>Organisational commitment</td>
</tr>
<tr>
<td>Intention to turnover</td>
</tr>
<tr>
<td>$\beta$  $t$</td>
</tr>
<tr>
<td>$\beta$  $t$</td>
</tr>
<tr>
<td>Organisational commitment</td>
</tr>
<tr>
<td>Tenure$^a$</td>
</tr>
<tr>
<td>Education</td>
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<tr>
<td>Manager</td>
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<tr>
<td>Business unit 1</td>
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<tr>
<td>Salary level</td>
</tr>
<tr>
<td>Salary increase</td>
</tr>
<tr>
<td>Promotions per year</td>
</tr>
<tr>
<td>ln(Tuition-reimbursement)</td>
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<td>ln(On-the-job training)</td>
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<td>ln(Company classes)</td>
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<td>$R^2$</td>
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<td>$\Delta R^2$</td>
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<td>$\Delta F$</td>
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<tr>
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</tr>
</tbody>
</table>

* Standardised.
$^a$ $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

DISCUSSION

In summary, there was mixed support for the hypothesis that participation in development is positively related to commitment. Only the number of days spent in on-the-job training over the past year was significantly related to organisational commitment. Support for the three remaining hypotheses regarding intention to turnover was also mixed. Employees who participated in on-the-job development
reported lower intention to turnover. On the other hand, employees who reported taking tuition-reimbursement classes expressed higher intention to turnover along with those who earned degrees. Finally, the rate of promotion after earning a degree was negatively related to intention to turnover. This examination of employee development participation finds that on-the-job development and tuition-reimbursement operate differently in their relationships to commitment and intention to turnover. The results indicate that employees who participate in on-the-job training and gain specific skills are more committed and less likely to intend to leave the firm, while employees who participate in tuition-reimbursement express higher intention to leave the firm.

This implies significant problems for an employment relationship predicated on providing employees with broadly marketable skills as a means to foster commitment and loyalty. These results suggest that the general skills which are intended to serve as a replacement for job security may actually serve to facilitate the exit of employees. In addition, the finding that promotion after earning a degree reverses the positive relationship between earning a degree and intention to turnover shows that retention also probably depends on whether general skills are met with career advancement. In other words, it appears that employees do not work hard to

<table>
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<th>TABLE 3 Regression analyses for archival data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational commitment</td>
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<tr>
<td>Tenurea</td>
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<td>Education</td>
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<tr>
<td>Manager</td>
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<td>Business unit 1</td>
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<tr>
<td>Salary level</td>
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<tr>
<td>Salary increase</td>
</tr>
<tr>
<td>Promotions per year</td>
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<tr>
<td>Took classes without earning a degree</td>
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<tr>
<td>Earned a degree</td>
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<td>Promotions per year after degree</td>
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<tr>
<td>$R^2$</td>
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<td>F</td>
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<td>Δ$R^2$</td>
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<tr>
<td>ΔF</td>
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<tr>
<td>N</td>
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</tbody>
</table>

* Standardised.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$. 

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gain general skills only to use them as insurance against potential unemployment. This suggests that employee development programmes that give employees broadly marketable skills should be integrated with career planning and promotion opportunities. While companies certainly cannot promote everyone who gains new general skills, care should be taken to retain high-performers in particular.

While this study sheds new light on employee development practices, it also raises questions for future research. First, future research should address the motivations that employees may have for enrolling in tuition-reimbursement and the types of degree they earn. Past research suggests that employees most often pursue voluntary development for career benefits (Maurer and Tarulli, 1994). However, it is possible that the relationship between earning a degree and intention to turnover is related to the type of degree they are seeking and whether the employee is seeking to move up or out of the firm. Second, on-the-job training was significantly related to organisational commitment while company classes were not. The differences between the two were unexpected and should be investigated further. Finally, the two theoretical perspectives on employee development suggest that it has both direct (through increased job alternatives) and indirect (through employee attitudes) relationships with turnover. Future research might benefit from improved measures and more sophisticated modelling techniques.

Several limitations to this study should inform the interpretation of the findings. Multiple measurements over time of organisational commitment and intention to turnover would have provided a more accurate picture of the effects of development participation. A one-time measure precludes any measurement of change in those variables directly attributed to the development experience or causal inferences from these data. It also prevents drawing any conclusion about whether participation in tuition-reimbursement actually causes increased intention to turnover. Potential problems may also arise from the fact that employees self-selected into the tuition-reimbursement programme and may differ in terms of both skill levels and their motivations for enrolling in tuition-reimbursement. Although salary, education and managerial status are proxies for skill levels, there may be other unobserved differences among employees taking tuition-reimbursement that were not controlled and may have affected their commitment and intention to remain. Past research has also shown that employees who enrol in voluntary development activities tend to be younger, more career oriented, with high self-efficacy and learning motivation (Noe and Wilk, 1993; Maurer and Tarulli, 1994; Warr and Birdi, 1998). These are all factors that may also make them more inclined to quit when they earn a degree.

There are also potential limitations to the generalisability of the findings due to the particular company and employee sample studied. The history of downsizing had impacted the composition of the workforce and employees averaged 14 years’ tenure with the firm. This means that many employees were with the company when the downsizing began and employability policies were introduced. During their tenure, these employees witnessed the firm moving away from a traditional employment relationship based on job security. This change may account for the unusual finding that tenure was negatively related to both commitment and intention to turnover. It is possible that the long tenured employees were expressing their discontent with the changes.

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The company studied was also exceptional in terms of the level of managerial support for participation in voluntary development. Although nearly all companies provide some type of training to employees and some 75 per cent offer some type of tuition-reimbursement benefit, there is a wide variety in the administration of employee development and the level of support that is offered to employees (Frazis et al., 1995). The company has a generous tuition-reimbursement programme including a $10,000 bonus for completing a degree, time off from work, and freedom to pursue any type of degree regardless of job requirement. In a firm without such a benefit for completing a degree, the relationship between participation in tuition-reimbursement and intention to turnover may be stronger.

Finally, the survey sample included only full-time salaried engineers and technical managers with a large percentage of college and advanced graduate degrees. These types of knowledge workers have more opportunities to participate in development and are more likely to appreciate the value of lifelong learning (Kozlowski and Hulst, 1987; Kozlowski and Farr, 1988; Dubin, 1990; Farr and Middlebrooks, 1990; Tharenou, 1997). However, this sample of engineers and technical managers is a particularly important group of employees because they are more sensitive to technological changes and obsolescence of skills and have been advocated most often as the target for employability policies.

Craig et al. (2002: 3) wrote in Harvard Business Review that ‘Companies have largely abandoned the implicit contract that traditionally promised employment security in exchange for loyalty’. While the scope of the transformation of the employment relationship can be debated (Jacoby, 1999; Auer and Cazes, 2000), this study of how employability policies might actually function suggests problems with the notion that general skill development alone can replace job security. From a larger perspective, companies need to proceed carefully if they are using retention to justify providing generous development benefits to employees (Tsui et al., 1997; ASTD, 1999). This study finds that employee development can have either positive or negative relationships with commitment and intention to turnover depending on the nature of the development activity and whether or not employees are rewarded when they gain new general skills.

Acknowledgements

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REFERENCES


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