



**Gender, timing and life circumstances – Motivational factors
influencing student participation in a post-experience taught
management programme**

A research report to Ako Aotearoa

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Contents

Executive summary	2
Introduction	3
Literature Review	3
Research approach	9
Summarised findings	9
Acknowledgement	11
References	12

Executive summary

The motivation of mid-career students can be expected to be more considered and intense than students whose studies continue from undergraduate programmes. The way that students perceive their personal circumstances and their career when they first make the decision to enrol, and what happens as a result of their studies can reveal how mid-career management programmes can be structured to ensure greater alignment with student needs and therefore greater student satisfaction.

This investigation explores the motivations of mid-career students and how they evolved as a result of the study experience, leading to deeper learning and greater satisfaction with learning outcomes. On the basis of Constructivist Theory, Self-Determination Theory and the Theory of Andragogy, providing autonomy support in course content and curriculum design, as well as competence support and relatedness in assignments and assessments should lead on to greater intrinsic motivation and deeper learning.

Introduction

Preliminary research in New Zealand indicates that many ICT professionals, whatever route they have taken to qualify themselves, often seek management skills in mid-career. How students perceived their personal circumstances and their career when they first make the decision to enrol will provide an indication of the perceived learning needs. What happened as a result of their studies can reveal how mid-career management programmes can be structured to ensure greater alignment with student needs and therefore greater satisfaction. It can also inform curriculum development and marketing strategy, and ensure closer alignment with government policy directions.

The purpose of the investigation was to determine student motivation prior to, during, and as a result of, tertiary studies with a view to enhancing deeper learning and greater student satisfaction. The findings are intended to inform the development of an online survey instrument to obtain quantitative data from which curriculum development and programme content can be determined.

Literature review

As a result of rapid technology change, the ICT profession requires its practitioners to continually up-grade their qualifications and reskill themselves. Individuals in mid-career face a decision about whether to focus on technological skills or to move into management areas, building on their technological knowledge and career experience. However the career experience might have been less than satisfactory and the professional might consider the possibility of a career change since the need to study further is becoming imperative. This literature review explores the work environment of many ICT professionals, the possible influences on their enrolment decision and the study environment that can impact on their learning motivation and experience.

Why this study is of growing importance.

Much publicity has been given to the impact of ICT on globalisation and its consequences for education – especially in the United States (Friedman, 2005; Douglass, 2006; and Florida, 2007). Foray and Lundvall (1996) observed that “In a knowledge economy, individuals, firms and countries are able to create wealth in proportion to their capacity to use the new technologies to access and share global knowledge and innovation.” This links with the observation of Halsey (1960) “In the technological society, the system of higher education no longer plays a passive role; it becomes a determinant of economic development and hence stratification and other aspects of social structure.” Many OECD nations, including New Zealand, are attempting as a matter of government policy to more fully integrate higher education into national economic and social policy (Douglass, 2006). The New Zealand government, (2005) as part of its Digital Strategy states “The Government will:

- facilitate building business e-commerce skills
- work to ensure that all New Zealanders have access to life-long learning opportunities to develop ICT skills for the 21st century
- build broader ICT literacy and capability in the community”.

In the current global economic situation, people in mid-career are seeking to insulate themselves against retrenchment or to reskill themselves for the future as they see it. This applies both to the ICT professions and other disciplines. Universities and other tertiary educational institutions are trying to find ways to remain relevant to their past students by building programmes that preserve the good relationships they have built up, based on the idea that it is easier and cheaper to maintain a customer relationship than to build a new one. Learning opportunities should be seen to stretch through mid-career and into the retirement

years. To date few tertiary institutions have exploited the considerable potential for New Zealand institutions to improve their study offerings by targeting their mid-career graduates.

Market influences driving the mid-career learning decision.

The nature of the Information and Communications Technology (ICT) profession is to be hospitable to entrants at many levels. People may enter directly after high school or after undergraduate studies. In New Zealand, as in many other parts of the world, bright, technology-minded people, can gain industry qualifications in very focused skills areas, such as programming, project management, systems analysis, database administration or telecommunications engineering, without the necessity of expensive tertiary education. Others can enter the ICT professions after undergoing a tertiary education, and find themselves seeking work in a market-place that demands experienced people. They also find themselves competing with contemporaries who have gained qualifications and experience – and therefore marketability – by eschewing the expense of a tertiary education and entering the workforce with a qualification gained from an industry training institution, such as Microsoft, Oracle, Cisco, etc.

In many cases, because of rapid changes in the technology, professionals are required to maintain their skills through ongoing professional training or further education. Accordingly, education providers need to know the needs and concerns of students in post-experience taught management programmes. One might expect considerable pre-programme goal-setting and self-awareness among students and that they expect their investment in the programme will lead on to major career transformation as a result. Mid-career taught management programmes need to understand their personal learning needs and be structured according to the demography, career-focus and sophistication of the students concerned.

There is evidence to suggest that changes in the employment market have given rise to a change in the way that people perceive and control their career choices and trajectories. Martin and Butler (2000) found widespread agreement on the rise of “boundaryless” or “protean” careers where the traditional career progression in a single organisation is giving way to a more uncertain career environment. Employment in multiple employer organisations forces people to take more responsibility for their own career management (Hall and Mirvis 1996). The work done by Morison, Erickson and Dychwald (2006) shows that insecurity and distrust follow waves of downsizing, burnout, and career disappointment for mid-career employees as their careers fall short of youthful ideals and ambitions. They are often frustrated by career bottlenecks, work/life tension, lengthening work horizons, skills obsolescence and the need for an upgrade of skills (Morison *et al* 2006). These changes in the employment environment provide significant incentive to mid-career people to reconsider their circumstances. In such an environment the individual must choose between being a victim of such circumstances and taking personal responsibility for their future. Insufficient attention has been paid to the need of mid-career people for self-actualisation and personal fulfilment, although Knowles’ Theory of Andragogy (1984) recognises the importance of self-direction in adults and the expectation that they must take responsibility for the consequences of their decisions.

Mid-career learning needs as a response to change

Continuous change is a permanent feature of human life and enables us to identify the knowledge requirements for our perceived future. Constructivist thinking proposes that people constantly make sense of their experiences by reflecting on them in the context of their prior experiences (Taylor, *et al*, 2000). Therefore, our learning needs often grow out of our personal perceptions of our larger life issues and the way that change is affecting them. The perspective that knowledge is constructed, rather than externally based, emphasises the importance of providing students with the ability to explore their current and prior experiences through a critically reflective lens (Taylor *et al* 2000).

Each time adults perceive an experience to be significant, their interpretations are influenced by “personal beliefs and values as well as norms and expectations derived from the sociocultural context.” (Cranton, 1996, p85) When adults realize that they construct their ideas and beliefs – and that they can, if they choose, reconstruct them – they experience themselves and the world around them differently (Taylor, *et al*, 2000). This process of construction and reconstruction is likely to depend on each individual’s autonomy and sense

of competence to make those interpretations, while the social context is formed by their relatedness to others in their immediate environment.

Because what adults learn may have a more immediate impact on their lives, they bring a sense of urgency to their learning and tend to personalise it to their own circumstances more so than younger students (Taylor *et al*, 2000). From this one would expect mid-career students to be highly motivated, to have a much clearer idea of their learning needs and to have a clear sense of what they want to become, both personally and in their career. One would also expect many people who study in mid-career to have more realistic perceptions of themselves and what they want in their future than one would expect of much younger, less experienced people.

Learning needs and outcomes

Davey's research into older students at Victoria University of Wellington in 2001 indicates that "as motives for returning to study, equal prominence was given to the desire to improve job prospects and personal development and fulfilment. Other motives, including setting an example or for something to do, were much less important" (Davey, 2001, p2). Davey recorded that where there were "trigger events" that prompted the enrolment, these were most likely to be "reduced demands for child-care, job loss or redundancy, and the money becoming available (often through employers)"

Simpson *et al* (2005) explored the personal and work profiles of MBA graduates, their career progress and the nature of skills and benefits they received from the MBA process. Their comprehensive list of skills and benefits arising from MBA studies included such extrinsic benefits as marketability, job prospects and enhanced salary, while the intrinsic benefits identified included enhanced confidence, credibility, job-satisfaction and interpersonal skills. Quoting the work of Burke and McKeen, (1994), Marshall, (1984), Nicholson & West, (1988), and Sturges, (1999), they found that men are likely to prioritise salary and status, whereas women tend to see career success more as a process of personal development through interesting and challenging work. They also found that whereas men tend to gain the extrinsic benefits of increased salary and managerial status; women tend to gain the intrinsic benefits of enhanced confidence, credibility and job satisfaction.

What is "deeper learning"?

Motivating students for learning and enhancing their academic performance remain "the most important but unresolved goals for educators in higher education" (Debnath *et al*, 2007).

According to Wickersham and McGee (2008) deeper learning "engages the learner who actively explores, reflects, and produces knowledge rather than recalls and regurgitates information..." To achieve this, they consider that the learner's work environment, experience and ways of learning be taken into consideration. For them deeper learning principles "indicate a higher degree of learner control, decision making, and organization" (Wickersham & McGee, 2008)

Cross (2005) on the other hand explains that students "learning for deeper understanding" are "actively engaged in learning" and "likely to learn more than students not so engaged." She emphasises the need for autonomy in achieving deeper learning – "people have to find their own answers by working through the pathways to knowledge" (Cross, 2005, p1). Her emphasis on autonomy is reflected in Atherton's (2005) perspective that "deep" and "surface" learning correlate fairly closely with motivation: "deep" with intrinsic motivation and "surface" with extrinsic. He notes that either approach can be adopted by a person with either motivation. Quoting Saljo (1979) he goes on to describe "deep" learning as

- "making sense or abstracting meaning" in which learning involves relating parts of the subject matter to each other and to the real world, and
- "understanding reality in a different way" in which learning involves comprehending the world by re-interpreting knowledge.

These two descriptions emphasize the abstract element of learning and the consequences of reflecting on reality. These features are likely to come from integrating new experience and discoveries with older learning and experiences. As such Saljo's descriptions of "deep learning" are appropriate for this investigation and will be used as the definition for "deeper learning".

Deeper learning and self-determination theory

The association of deeper learning with intrinsic motivation and student autonomy resonates with the work of the Self-determination theorists. Deci and Ryan (2000) argued that intrinsic motivation is associated with better learning, performance, and well-being, quoting Benware & Deci, (1984); Deci, Schwartz, Sheinman, & Ryan, (1981); Grolnick & Ryan, (1987); Valas & Sovik, (1993). Deci, Vallerand, Pelletier and Ryan (1991) describe the central features of optimal learning as being "conceptual understanding and the flexible use of knowledge" (Deci *et al*, 1991, p326). They make an important connection between optimal learning and the motivational conditions that promote personal growth, interest and adjustment. This insight was based on studies by Daoust, Vallerand & Blais, (1988) and Vallerand, (1991) that have shown "that students who had more self-determined forms of motivation ... were more likely to stay in school than students who had less self-determination" (Deci *et al*, 1991, p 331) . Others studies have linked intrinsic motivation and autonomous forms of extrinsic motivation to positive academic performance. For example, Grolnick & Ryan (1987) found that elementary school students who reported more autonomous motivation for doing schoolwork in general evidenced greater conceptual learning and better memory than did children who reported this autonomous motivation. Gottfried (1985, 1990) reported significant positive correlations between intrinsic motivation and achievement (as measured by standardised achievement tests and by teachers' ratings of achievement). Ryan and Connell (1989) found positive correlations between autonomous regulatory styles and enjoyment of school, while more controlling regulatory styles were associated with greater anxiety and poorer coping with failures. (Deci *et al*, 1991, p332)

While these findings apply to school students, a central hypothesis of self-determination theory is that social contexts that support people's being competent, related and autonomous will promote intentional (motivated) action and furthermore that support for autonomy in particular will facilitate that motivated action's being self-determined (rather than controlled). Supports for competence (eg positive feedback) will enhance motivation only if it is administered in a way that is autonomy supportive (Ryan, 1982). Similarly supports for competence (eg optimal challenge and performance feedback) and relatedness (eg parental involvement and peer acceptance) facilitate motivation. Such supports facilitate intrinsic motivation and integrated internalisation only to the extent that they are accompanied by autonomy supportive rather than controlling interpersonal contacts (Deci *et al*, 1991). They maintain that "congratulating students for having done well at a self-initiated educational activity is likely to promote feelings of competence and intrinsic motivation, whereas praising them for doing what they "should" have done or what you told them to do is likely to lead to their feeling controlled. This in turn would reduce intrinsic motivation and strengthen non-autonomous forms of extrinsic motivation" (Deci *et al*, 1991, p334)

Self-determination theory and the mid-career student

Unlike most other theories, self-determination theory distinguishes between self-determination and controlled types of intentional regulation. Motivated actions are self-determined to the extent that they are engaged in wholly volitionally and endorsed by one's sense of self (Deci & Ryan, 1991). Unlike other theories, self-determination theory postulates about basic psychological needs that are inherent in human life (Deci *et al*, 1991, p326). The theory focuses primarily on three such innate needs: the need for competence, for relatedness and for autonomy (or self-determination).

- Competence involves understanding how to attain various external and internal outcomes and being efficacious in performing the requisite actions.

- Relatedness involves developing secure and satisfying connections with others in one's social milieu.
- Autonomy refers to being self initiating and self regulating of one's own actions.

In their explanation of Self-determination theory Deci and Ryan (2000) argue that there are three innate psychological needs - for competence, autonomy, and relatedness. Intrinsically motivated behaviours are based on the innate need of individuals to feel competent and self-determined (Deci 1975). Intrinsically motivated activities are characterized by novelty, (Berlyne 1971), by optimal challenge, deep task absorption and "flow" (Csikzentmihalyi 1998; Izard 1977; Danner and Lonky 1981; Deci 1975). Providing choice (Zuckerman, Porac, Lathin, Smith and Deci 1978) helps satisfy peoples' need for autonomy, and augmenting peoples' confidence in their performance (Tafarodi, Milne and Smith 1999) does the same for peoples' need for competence. Thwarted satisfaction of the three innate needs for autonomy, competence and relatedness, results invariably in negative consequences for mental health (Deci and Ryan 2000). Quoting the work of Deci (1972), Wiersma (1992), Izard (1977), Csikzentmihalyi (1998) and Amabile, Hill, Hennessey, & Tighe, (1994), Kinman and Kinman (2001) conceptualised the components of intrinsic motivation as being:-

- Self-determination (preference for choice and autonomy)
- Task involvement (task absorption and flow)
- Competence (mastery orientation and preference for challenge)
- Curiosity (preference for complexity)
- Interest (enjoyment and fun).

On the other hand, when individual behaviour is externally regulated by some desired result such as a tangible reward or to avoid punishment, such extrinsic control has been found to undermine intrinsic motivation (Deci, Koestner, & Ryan, 1999). In these situations, people feel less ownership of the origins of their behaviour and thus display less intrinsic motivation and less satisfaction. Not only monetary rewards, but other tangible rewards can significantly undermine intrinsic motivation (Deci *et al* 1999). Additional studies showed that threats (Deci and Cascio 1972), surveillance (Lepper and Greene 1975), evaluation (Harackiewicz, Manderlink and Sansone 1984), and deadlines (Amabile, DeJong and Lepper 1976) also led to the undermining of intrinsic motivation. Kinman and Kinman (2001) conceptualised extrinsic motivation as "involving a cognitive assessment of some activity as a means to an anticipated outcome: ie behaviour performed not for its own sake, but for its consequences.... It is concerned with material, social or symbolic rewards." Quoting Amabile *et al* (1994) and Lepper and Greene (1978), Kinman and Kinman listed the following components of extrinsic motivation:-

- Competition
- Evaluation
- Status
- Money or other tangible incentive
- The avoidance of punishment, or
- The dictates of other people.

Self-determination theory proposes a motivational spectrum along which extrinsic motivations can change and manifest as more intrinsic motivation (Deci and Ryan 2000). These are external regulation, introjected regulation, identified regulation, and integrated regulation. (Blais, Sabourin, Boucher, & Vallerand, 1990, p1022)

- **External regulation** refers to the traditional view of extrinsic motivation whereby the person engages in the activity to obtain external rewards or to avoid punishments. A person may enrol in a study programme in mid-career because her employment contract requires it but without any personal ownership of the enrolment decision.
- **Introjected regulation** refers to the first level of internalised self-regulation in which behaviours are initiated and regulated by internally controlling imperatives. The

student's next promotion is dependant on a tertiary qualification in management, but he is interested in acquiring management skills anyway.

- **Identified regulation** is a form of extrinsic motivation based more on choice in which the source of regulation comes not only from within the person but is conducted in a self-determined way. A person enrolls in a study programme not only because of his employer's requirement, but also to fulfil a long-term ambition to obtain a university degree. The student values or identifies with the activity in which he or she engages.
- **Integrated regulation.** Here, the person not only identifies with the regulation but has also integrated it with other aspects of his or her life. With this type of motivation the activity is highly chosen and endorsed by the person. A woman studies management because her studies are funded by her employer and the qualification will enable her to set up her own business - which is really what she desires to do at that stage of her life. (Blais *et al*, 1990, p 1023)

The four gradations of extrinsic motivations identified above could be seen as the middle ground occupied by those students who enter a programme for extrinsic reasons and then discover that, increasingly, the learning experience leads on to a greater intrinsic motivation. The students' original extrinsic motivations, encouraged by the learning experience, move along the motivational spectrum towards an intrinsic manifestation, deeper learning and greater personal satisfaction and fulfilment. Accordingly, if one assumes that humans naturally incline towards an "organized coherence among the elements of their psychological makeup and between themselves and the social world" (Deci and Ryan 2000) then one can begin to assist individuals to achieve some measure of self-actualisation in mid-career by integrating their personal circumstances, career environment and learning needs (Deci and Ryan 2000).

In their work on high school student motivation, Deci, Vallerand, Pelletier, & Ryan, (1991) identified the ideal school system as one "that succeeds in promoting in students a genuine enthusiasm for learning and accomplishment and a sense of volitional involvement in the educational enterprise" (p325). The same could be said for any educational programme, especially one that aims to achieve levels of deeper learning and greater student satisfaction. Self-determination theory (SDT) offers an explanation of the way that deeper learning flows from intrinsic motivation leading on to greater student satisfaction and fulfilment. As such it recommends itself as a theoretical basis for an investigation into the expectations, learning experiences and career outcomes of mid-career students to explain how a programme can provide a more satisfying learning experience.

The rich range of personal experiences that mid-career students bring to the learning situation cannot be overlooked, and this aspect links the contribution of self-determination theory with that of Constructivist theory and Knowles Theory of Andragogy.

Constructivism and Andragogy

Knowles' thinking on andragogy, (Knowles, 1984) is an attempt to develop a theory specifically for adult learning. He emphasises that adults are fundamentally self-directed and expect to take responsibility for decisions. The implications of this for the design of learning are that:-

- Adults need to know why they need to learn something
- Adults need to learn experientially,
- Adults approach learning as problem-solving, and
- Adults learn best when the topic is of immediate value (Knowles, 1984).

As we have seen, constructivist thinking proposes that people constantly make sense of their experiences by reflecting on them in the context of their prior experiences (Taylor, *et al*, 2000). Their learning needs often grow out of personal perceptions of their larger life issues and the way that change is affecting them.

The perspective that knowledge is constructed, rather than externally based, emphasises the importance of providing students with the ability to explore their current and prior experiences

through a critically reflective lens (Taylor *et al* 2000). In practical terms, andragogy means that instruction for adults needs to focus more on the process and less on the content being taught. Strategies such as case studies, role playing, simulations, and self-evaluation are most useful. The classroom situation should maximise the contribution that mid-career students can make to their own learning and minimise those aspects of course structure and assessment that might undermine intrinsic motivation. Instructors adopt a role of facilitator or resource rather than lecturer or grader. In theory, providing autonomy support by increasing student choices in their curriculum options will help satisfy students' need for autonomy, and enhance their confidence in their performance (Deci & Ryan, 2000).

Research approach

The investigation was intended to cast light onto the educational needs and post-programme career paths, of mid-career ICT professionals, by exploring student perceptions of the personal circumstances driving the decision to enrol and how those related to the outcomes of the study experience. To achieve this, the research was carried out in several stages:-

1. A series of focus groups
2. An initial online survey
3. A comprehensive literature survey leading on to
4. A qualitative investigation of selected graduates using a semi-structured interview methodology

The research outputs from this project

The research funding application to Ako Aotearoa was based on preliminary findings that were published as Hooper (2006 and 2007). Subsequently, a qualitative investigation into the perceptions of selected graduates of a mid-career post-experience management programme for ICT professionals was conducted using a semi-structured interview methodology. The findings indicated that such programmes can fulfil an important function in providing lifelong educational opportunities. Students entered such programmes for reasons beyond extrinsic requirements to obtain management skills and career advancement. Too often curricula are determined by the expertise of available academic staff rather than on the learning needs articulated by students. A greater understanding of the learning requirements and entry motivations of mid-career students by programme administrators can enhance programme relevance and deeper learning.

The research has been written up and will be published in *Higher Education Research Development* to appear in October 2009.

Summarised findings

The encouragement of autonomy, competence and relatedness in the learning and teaching environment can be expected to enhance deeper learning and more positive learning outcomes for students. This investigation has revealed that students enrolling in mid-career management programmes were motivated by factors in their domestic and work environments that provided the triggers to the enrolment decision. These included situations such as children leaving home or no longer requiring significant parenting, retrenchment, downtime, or dissatisfaction in the work situation.

Motivations for enrolling were often expressed in extrinsic terms initially, especially by younger male students, whereas female students and older males tended to articulate their motivation for study in terms of intrinsic motivators. Many respondents indicated that their motivations changed as a result of their studies, articulating increased intrinsic motivation and a lesser emphasis on extrinsic motivations. Such changed motivations were reflected in a change in respondents' study goals and career ambitions. These changes often manifested in

new ambitions, unanticipated career changes and an increased desire to study further. In some cases personal changes indicated increased self-confidence, including a sense of movement, of increased self-awareness, of reflection and of intrinsically motivated behaviour.

The emergence of intrinsic motivators as a result of mid-career studies should lead on to deeper learning and greater personal satisfaction and fulfilment. Students that are delighted by their studies – especially in mid-career – are likely to pursue further educational opportunities. Self-determination theory posits the need for autonomy as an antecedent of intrinsic motivation. The ability for students to tailor-make their study programmes based on their perceived study needs would have pedagogic advantage. Building such a capacity into the curriculum design, especially for post-experience management programmes would likely lead on to deeper learning and longer participation in the learning environment.

Accordingly, curriculum development and programme design need to be based on an understanding of student motivation at the time of or prior to enrolment. Greater and more considered use of the selection process is expected to lead on to enhanced relevance of the programme, deeper learning and greater student satisfaction. For ICT professionals in New Zealand, the development of mid-career upskilling programmes can also contribute to national economic competitive advantage.

Implications for learning and teaching

The implications of these findings are that deeper learning will flow from institutional support for autonomy, the encouragement of competence and of relatedness. Accordingly, the greater the degree of self-determination manifested by a student, the greater the likelihood that that student will be engaged in deeper learning behaviours. A clearer understanding of the motivations of enrolling students will provide administrators with the ability to predict the likelihood of deeper learning. This seems to imply that deeper learning is more a function of student motivation than it is of teacher skills. However, this is not so. Teacher support for autonomy and competence through providing learning choices, greater student involvement in selecting course content, performance assessment and curriculum development is particularly important when dealing with mid-career students. On a personal level, encouraging feedback has an enormously important influence on the development of deeper learning behaviours. The attitude of teachers to their profession and especially to their students can encourage or destroy intrinsic motivation and therefore deeper learning in the student. Student experiences of autonomy, competence and relatedness in the learning environment need to be the focus of institutional endeavour if the institution is to achieve greater student satisfaction with study programmes, greater throughput, optimum completion rates and improved teacher ratings.

The next stage of this research will be to derive a survey instrument from the above findings in order to test their statistical validity as a prelude to more responsive curriculum design, improved pedagogic intervention and more relevant course content. Collaborative agreements have been negotiated with universities in South Africa, Britain and Canada. Discussions have been held with significant self-determination theorists and, on the basis of those discussions, a research instrument is being developed based on their earlier research into self-determination theory.

It is expected that this research will have significant impact on the recruitment of mature students into post-experience taught management programmes opening up a hitherto little-exploited market for tertiary education providers.

Strategic importance of the research findings

Although they enter the profession from a variety of qualification routes, Information and Communications Technology professionals are in high demand worldwide. New Zealand, like many other countries, sees strategic advantage in developing a Knowledge Economy as a national objective. It has promulgated an electronic commerce policy that provides immigration credits as well as educational opportunities and other incentives for ICT professionals. Preliminary research in New Zealand indicates that many ICT professionals, whatever route they have taken to qualify themselves, often seek management skills in mid-

career. These preliminary findings have informed the intention of expanding the research to encompass a wider range of mid-career, post-experience taught masters programmes, both in New Zealand as well as in the UK and Canada.

However, although the findings are based on ICT professionals in a post-experience management programme, it is anticipated that they are applicable to other programmes attracting mid-career students. Future investigations will broaden the enquiry accordingly. This could have positive implications for continuing education programmes, as well as those targeting mature students seeking greater personal fulfilment and self-actualisation in their career.

Benefits for teaching and learning practice

The outcomes will provide a basis for curriculum planning, marketing and the development of learning outcomes in professional development programmes. Such programmes provide a rich opportunity for universities to collaborate with business and government in providing the skills needed by mid-career professionals and to tailor-make their programmes accordingly.

For countries wishing to grow their participation in the knowledge economy by harnessing the available ICT people and upskilling them, this research is of particularly interest. For the participating institutions, an opportunity is presented of joining with similar, but non-competing, programmes to understand the market opportunities for mid-career taught masters programmes in information systems management and related disciplines. The indications are that this will be a major source of student numbers, and of income, in the coming decades.

Impact of the learning experience

The likelihood that the learning experience itself results in changes in motivation is crucial for curriculum development and the determination of course content. Discovering intrinsic learning needs in mid-career can lead to a total transformation of the person's career. It can also lead students to experience efficacy, competence and self-determination – as well as better learning, performance, and well-being. Being sensitive to such changes and making provision for students to retain their autonomy in the face of such changes is an important consideration for programme administrators and curriculum developers.

Fitting into the Ako Aotearoa vision

The Ako Aotearoa vision focuses on supporting projects that provide examples of good practice that identify critical success factors, and develop practical action-oriented suggestions for enhancing effectiveness of tertiary teaching and learning practices. Building on earlier New Zealand research into the motivations of mid-career students, the intention is to expand this investigation to make it more generalisable and applicable both in New Zealand and in other countries. The outcomes are expected to impact on a range of programmes for mid-career students as part of the development of lifelong learning possibilities. It is also expected to provide the basis for developing quality support for groups who are under-represented in employment.

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