From the Back Door into the Mainstream: The Characteristics of Lifelong Learners

Joachim Stöter, Mark Bullen, Olaf Zawacki-Richter, and Christine von Prümmer

Yesterday’s non-traditional students [are] tomorrow’s lifelong learners.

Schuetze & Slowey

KNOW YOUR LEARNERS!

Access to a university education used to be the privilege of a few. In industrialized countries of the 1950s an average of barely 5% of a particular age group took up academic studies (Teichler & Wolter, 2004, p. 64). The traditional student profile was that of a person under 25 years of age, male, financially independent, who studied full-time and went directly from school to university (Garz, 2004). What has changed? At the beginning of the 21st century, about 50% of a particular age group enrols for studies at a tertiary education institution in OECD countries (OECD, 2010). Surprisingly, this enormous expansion in numbers has been overshadowed by other changes, for example, large changes in the structure of the higher education system, the substance of programs offered, and the function of higher education itself.
Contemporary higher education is characterized by increasing diversification, away from the traditional student profile. Forty-five per cent of the current post-secondary population in America comprises adult students (Ke, 2010). According to figures presented by the National Centre for Education Statistics in the United States, 39% of the 21 million undergraduate and graduate students in the US are over 25 years of age, and 11% are 40 years of age or older. The percentage of part-time students increases with age. While only 22% of students aged 18 to 24 are enrolled part-time, 67% of adult students of 40 years or more choose this mode of study (Knapp, Kelly-Reid, & Ginder, 2011). Gender balance is also changing. For example, in Canada the percentage of female university graduates grew from 34% in 1971 to over 60% in 2006 (Frenette & Zeman, 2007). Additionally, more and more young people are enrolling in online programs—a trend that indicates a change in the clientele of distance learning universities. Nick Allen (2004) former vice-president of University of Maryland University College, an institution focussing on part time and distance education programs, writes:

Our student body is quite diverse. In age, the biggest segment is from 25 to 44; but increasingly the age group under 25 is growing. These are traditional students who usually go to residential campuses. However, in the United States, those campuses are becoming more and more expensive, and many students have to work and go to school part-time. So increasingly they come to us. (p. 274)

In the 1960s and 1970s, political interest in “non-traditional studies” (cf. Gould & Cross, 1977) was awakened because society began to acknowledge education as the basis for wealth and the creation of value. Universities began to open their doors to non-traditional target groups to enable “mass higher education.” This was the beginning of the open learning movement and the establishment of open universities as distance education institutions. In his book Learning at the Back Door: Reflections on Non-Traditional Learning in the Lifespan, Charles Wedemeyer (1981) emphasizes the importance of open and distance learning for widening access to diverse groups of non-traditional students: “The new urgency respecting learning, to cope with societal behavioural problems (health, energy, crime, human rights, resources, peaceful co-existence, population, pollution, etc.), signals the need for educational approaches that recognize and acknowledge the significance of non-traditional learning throughout life” (p. 206).
The open universities experiment was probably the most important and innovative higher education reform initiative of the 1960s and 1970s (MacKenzie, Postgate, & Scupham, 1975). Peters (2008) highlights the success of the Open University UK: “The Open University [...] became famous for its open entrance policy, its focus on teaching adults, and for its extraordinary success in producing more graduates than all other universities of the country put together” (p. 227). He concludes that “distance education paves the way from elitist education to mass education” (p. 229). Tait (2008) emphasizes that a major function of open universities is to provide “individual opportunity and social justice that the higher education system cannot or will not satisfy because of its own interests or limited vision” (p. 92). In addition to these reasons, the cost-effectiveness of these models as compared to traditional campus-based education allows for the growth of open universities in the developing world.

Over the last decade, e-learning and distance education has developed rapidly in the higher education sector. Tait noted in 1999:

The secret garden of open and distance learning has become public, and many institutions are moving from single conventional mode activity to dual mode activity, that is to say offering a range of modes of study from the full-/part-time and conventional/distance spectrum. (p. 141)

Today, there is almost no higher education institution that does not utilize e-learning in blended learning programs or at least in addition to on-campus lectures and labs. Thus, online distance education has moved from the periphery into mainstream higher education.

Furthermore, the development of online distance learning is speeding up the globalization of the education market (Amirault & Visser, 2010). Higher education institutions use modern information and communication technologies to reach new target groups and to export entire transnational programs (cf. McBurnie & Ziguras, 2007; Simonis & Walter, 2006). The growth of international cooperation brings together learners with diverse cultural backgrounds (cf. chapter 2 by Gundawarden in this volume). Mason (1998) describes the potential and opportunities of global distance education: the possibility that participants can learn alongside classmates from all over the world; access to high quality education programs no matter where you live; worldwide access to the expertise of international experts; access to a broad curriculum that a single institution could never offer; and the possibility of
generating new financial gains in the global education market through the acquisition of new target groups.

Since the globalization of the education market leads to further diversification of the student body, the instructional design of international programs should take into account intercultural aspects (cf. chapters 2 and 12 in this volume, and Zawacki-Richter, Bäcker, & Bartmann, 2010). The cultural context of a target group should be incorporate into the critical review and adjustment of existing programs. Experts who emphasize the importance of a culturally balanced curriculum warn that the internationalization of education programs is often driven by technology and serves mainly marketing and commercial purposes (Lauzon, 2000). The economic power of selling international degrees becomes clear when considering the example of Australia: after raw materials, higher education programs are the main export goods of the country\(^1\).

The increased diversity in student profiles represents a challenge for many conventional universities whose curricula, delivery modes, and student support systems are often not able to respond to the diverse needs of “non-traditional” students (Kerres & Lahne, 2011). It is essential to give attention to the context, characteristics, motivation, abilities, prior knowledge, experience, and so forth of the learners to design appropriate and successful learning opportunities and to avoid failure and drop-out. Therefore, learner and context analysis are the first fundamental steps in the instructional design process: “As designers, we need to understand the relevant characteristics of our learners and how those characteristics provide either opportunities or constraints on our designs” (Morrison, Ross, & Kemp, 2007, p. 52).

THEORETICAL CONSIDERATIONS

Lifelong Learning and Distance Education

The theory and practice of adult learning is one of the main topics within the concept and political agenda of lifelong learning (LLL) in Europe. The integration of formal, non-formal, and informal education (cf. Foley, 2004) to enable continuous lifelong and personal development is partially in response to the OECD lifelong learning discourse, and has also been

influenced by various scholars and theorists striving to articulate a systematic approach to lifelong education (e.g., Adiseshiah, 1973; Ahmed, 1982; Bélanger, 1994; Cropley, 1980; Dave, 1976; Gelpi, 1984; Giere, 1994; Husén, 1974; Knoll, 1974; Lengrand, 1970; Suchodolski, 1976). The OECD report *Recruent Education: A Strategy for Lifelong Learning* (Kallen & Bengtsson, 1973) focuses mainly on aspects of employability, nevertheless, that discussion had a great impact on the field of education itself. Wedemeyer (1981) points out that the term *lifelong* could suggest that learning is a step-by-step process based upon add-ons after the formal learning time in school, while the integration of non-formal and informal, as well as non-traditional learning could rather be described as *lifespan* learning. In fact, LLL connects all learning throughout one’s whole life and should therefore be seen as a holistic approach to learning.

A definition of the concept of LLL was developed by Dave (1976), who suggests that education is a process during one’s lifespan, which aims at the “fullest possible development in different stages and domains of life” (Dave, 1976, p. 34). Even though Dave (1976) points out that “lifelong education is not confined to adult education” (p. 51), the development of LLL greatly influenced the field of adult education and has become a major area for policy making. Various related associations, institutions, and networks were founded to focus on the topic (e.g., International Council for Adult Education [ICAE], UNESCO Institute for Lifelong Learning [UIL] and the European Association for the Education of Adults [EAEA]). The EAEA overview of adult education and LLL within different European countries shows that each country follows its own unique policy for LLL. Nevertheless, member states of the European Union have developed similarly while other countries have expanded their formal adult education system (Tuijnman & Boström, 2002). However an international study on policy issues in ten different countries (Australia, Brazil, Côte d’Ivoire, Hungary, India, Morocco, The Philippines, Switzerland, England and Wales, and the US) revealed that still huge dissimilarities exist among countries with regard to their LLL strategies, laws, and policies, which hinder the effective establishment of adult learning opportunities (Haddad, 1996). These findings raise the question of how best to offer educational opportunities to adults in terms of LLL, and

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2 EAEA, Country Presentations: http://www.eaea.org/country [22.01.2012]
how to define a consistent research approach to adult education, particularly for online distance education.

As Daniel (2005, p. 9) points out, distance education “will be a powerful tool for supporting lifelong learning” (Daniel, 2005, p. 9). The instructional foundation of most models of distance education supports self-directed and autonomous learning (see Evans, Haughey, & Murphy, 2008), and such self-management skills are essential to LLL. Not only does distance education encourage the concept of lifespan learning, but it equips students with the tools they need to develop a self-regulated learning approach, thereby enabling their success (Peters, 2008).

In order to respond to the needs of adult students, it is important to consider their characteristics and profiles. With regard to LLL, Dave (1976) emphasizes that: “Lifelong education is characterized by its flexibility and diversity in content, learning tools and techniques, and time of learning” (pp. 51–52). These aspects need to be taken into account when programs are developed for adults. Since most adults have to juggle various commitments like work or care of children or family members, they require more flexible ways to learn (Kember, 1995). Thus, online distance education is an appropriate mode of delivery to respond to the needs of adult learners.

NON-TRADITIONAL STUDENTS IN HIGHER EDUCATION

The distinction between traditional, distance and so-called non-traditional students (NTS) is becoming blurred (Thompson, 1998; Teacher & Welter, 2004; Kerri’s & Lane, 2009). Traditional students are using more and more tools developed in the context of distance education, and NTS are a dynamically growing group amongst on-campus students, while distance learning is also expanding in terms of enrolled students at the growing open universities. Further, traditional students are beginning to develop similarities with NTS in terms of everyday life commitments (Wilkesmann, Virgillito, Bröcker, & Knopp, 2012).

The traditional student model began to change as far back as the early seventies and to a lesser extent, even before that (Gould & Cross, 1972). Between 1972 and 1974, the number of part-time students began to surpass the number of full-time students in the United States, and for the year 1980 Wedemeyer observed student groups were differentiated into more and more sub-groups (Wedemeyer, 1981). This new, yet diverse, group of
learners was denoted in various different ways: adult student, re-entry student, returning student, adult learner, new majority, under-represented, working-class, widening participation students, first-generation entrants, and more (e.g. Ely, 1997; Stuart, 2006). Although non-traditional student is now a frequently used term, a widely accepted definition does not exist. Ely described non-traditional students in just a few sentences: “I am your adult student, age 25 or older, who has returned to school either full-time or part-time. While attending school I also maintain additional adult life responsibilities such as employment, family, and financial commitments. […] I am your non-traditional student” (Ely, 1997, p. 1).

Such an attempt is only a first step in defining this group of students, and many countries apply different definitions. For example, the National Centre for Education Statistics (NCES) in the United States refers to seven different aspects in defining NTS: “delayed enrollment into post-secondary education, attended part time, financially independent, worked full time while enrolled, had dependents other than a spouse, was a single parent, did not obtain a standard high school diploma” (Horn & Carroll, 1996, p. 2). To fulfill even one of these criteria is enough to be classified as NTS in US statistics. A widely applied German definition uses three categories: mode of study (part-time, distance, or parallel with paid work), alternative ways to access higher education (without formal entrance qualifications), and recurrent learners who come to university at a later point in life (Teichler & Wolter, 2004). Another definition of NTS was implemented by the European Union Targeted Socio-Economic Research Program Project (1998–2001) on adult access to higher education (HE): “A new mature student entrant (by age in respective countries) with no previous HE qualifications whose participation in HE is constrained by structural factors additional to age” (Johnston et al., 2002, p. 5).

An international study about student retention in higher education named five different groups of NTS: “low income or economic status groups, people with disabilities, students who are first in their family to participate in higher education, mature age students, and people from minority groups and refugees” (Fleming, 2009, p. 9). Despite these various definitions of NTS, it remains challenging to describe exactly what kinds of characteristics define these students. It becomes even more difficult from the perspective of international comparison (Wolter, 2012), particularly in attempting to compare different national proportions of NTS.
Varying national definitions of NTS can lead to widespread differences in recorded numbers. The 2008 Eurostudent analysis (Orr, Schnitzer, & Frackmann, 2008) indicates percentages of this group for different European countries. While Germany, for example, exhibits only about 4% of non-traditional students among its total student population, the figure for Sweden is almost 40%. It is not only different definitions that explain these varying percentages. For example, the structure of German higher education itself creates a problem, because the mode of full-time and on-site studies, together with curricular inflexibility, restricts the opportunities of NTS for parallel work and study (Wolter, 2012). In addition, European-funded research projects such as PRILHE (Koivista & Jokinen, 2007) indicate that national classifications of low income, social class, and ethnicity cannot be used in international comparative studies without further explanations (RANLHE, 2009).

The most recent definition, provided by Schuetze and Slowey (2012) identified seven types of lifelong learners in an international comparison study, which could be useful as a starting point:

- second chance learners
- equity groups (from under-represented groups in HE)
- deferrers (who start their study years after they have completed formal entrance qualifications to access higher education)
- recurrent learners (who return to university for another academic degree)
- returners (for example, drop-out students)
- refreshers (who upgrade their knowledge)
- learners in later life

CHARACTERISTICS OF ADULT LEARNERS IN HIGHER EDUCATION

In order to address the needs of adult students—and NTS are one rapidly growing group within these students—their distinctive characteristics need to be taken into account. Thompson (1998) records that demographic and situational variables like gender, age, location, life roles, ethnic background, and disabilities emerged as key aspects in various studies. Research often focusses on some of these aspects and reveals that these elements are linked to the concept of open and distance learning (Chao & Good, 2004), because open learning demands more intrinsically motivated students and removes
barriers to learning opportunities for adults.

Adult education requires different approaches compared to teaching children or undergraduate students. Adults accumulate knowledge and experience during their lifetime, due to the influence of experience, adult learning is more practical, life orientated, and problem based (Wlodkowski, 2008). According to Ke, high-quality online learning for adults is characterized by: “1) social interaction and collaboration with peers, 2) connecting new knowledge to past experience, 3) immediacy in application, 4) a climate of self-reflection, and 5) self-regulated learning” (2010, p. 808). Such an approach to adult learning is characterized by deep learning (Fink, 2003). However, these findings are not only true for adults but for learners of all ages, which supports the need for a precise description of distance learners’ characteristics in order to work out their specific learning needs.

While being employed or being older than 24 years seem to be comprehensible criteria for the description of adult students, instructional designers need to know more than this about their target groups. Various authors and studies (to be discussed on the following pages), indicate several characteristics that have a direct influence on the instructional design of a course—whether online or face-to-face—in order to tailor it to the needs of the target group.

While entry characteristics such as educational qualifications, family situation, employment (amongst others) have been well examined, Kember emphasizes that for open learning courses most studies do not notably analyze such characteristics as predictors for learning outcomes. Nevertheless, these variables do influence student behaviour in open learning scenarios: “Background information on students is important as a starting point” (Kember, 1995, p. 77).

Personality variables can explain success or the extent of participation in online distance education. Biner, Bink, Huffman, & Dean (1995) widen the list of variables to include cognition, emotions and behaviour, while other authors (Willis, 1994; Eastmond, 1995) emphasize flexibility, autonomy, and tolerance of ambiguity as being influencing factors. What is known as the Big Five general categories of personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism), could be included in this consideration as a meaningful way to develop an empirical research approach to investigate personality factors of students (McRae & Costa, 1987, 1997; McCrae & Terracciano, 2005). Another well-known personality
scale, the sixteen personality factor questionnaire (16PF Questionnaire) may be used to predict academic achievement and characteristics of college dropouts (Cattell & Mead, 2008).

Another aspect that affects learners’ success is the concept of self-directedness. The idea that learners who are separated from their teachers need to demonstrate a greater capacity for autonomous learning has led to a scale to measure this variable, the Self-Directed Learning Readiness Scale (SDLRS) (Durr, Guglielmino, & Guglielmino, 1996; Fisher, King & Tague, 2001), but Thompson (1998) concludes that the results of various studies are inconsistent.

Motivation is another variable that has been the subject of various studies. Not only does learning itself require ongoing motivation, but also the decision to enrol as a distance learner is influenced by motivational and volitional factors. However, conflicting evidence is reported for the impact of motivation on learning progress. For example, Sankaran and Bui (2001) found that higher motivation can lead to better performance—in web-based as well as on-campus settings—and that students with equal motivation levels perform comparably, regardless of the learning format. A study by Hochholdinger, Meister, and Schaper (2008) about learning and performance goal orientations as special aspects of learning motivation revealed no significant influence on learning success. While distance education students are often described as highly motivated adult learners, Qureshi, Morton, and Antosz (2002) found that distance learners were less motivated than on-campus students.

Time (in terms of both availability and flexibility) and space (in terms of vicinity) are essential attributes that influence one’s choice of where to enrol. Willis (1994) introduced the learning environment as another aspect, which focusses on the technical facet of open and distance learning (ODL) and seems to be a key reason that students join online programs. Other reasons for enrolling in online programs are many and often individual. Some students prefer technological settings, some may have had bad experiences with traditional learning environments, or some have decided to study independently (Eastmond, 1995). But more likely they require flexibility.

The mode of interaction between learner, instructions, learning tools, teachers, and other learners influenced the development of a wide array of models to measure different learning styles: Kolb’s model, Honey and
Mumford’s model, Gregorc’s model, the Sudbury model of democratic education, Fleming’s VAK/VARK model, the Myers Briggs Type Indicator (MBTI) and the DISC assessment (cf. Thompson, 1998; Cassidy, 2004). The neuropsychological hybrid model of learning (Jackson, 2009) has recently received attention and is supported by empirical evidence.

While all these concepts sound good on paper, the implementation into the daily work of educators is at least questionable. Studies about learning styles are indeed widespread but a growing number of critics argue against the validity of these studies. Regarding the methodological approach of learning style research, Curry describes the problem very accurately: “Like the blind men in the fable about the elephant, learning styles researchers tend to investigate only a part of the whole and thus have yet to provide a definitive picture of matter before them” (Curry, 1990, p. 50). Reviews about learning style theories and studies revealed that no effect due to the style of learning alone could be found (cf. Cohen, Hyman, Ashcroft, & Loveless 1989; Coffield, Moseley, Hall, & Ecclestone, 2004; Massa & Mayer, 2006; Wallace, 2011). As Coffield and colleagues point out, there are over 70 different models about learning styles, and the mainstream use of these models has somehow lead to an unreflective adoption of some measurement tools. Something that was mentioned in an earlier context by Richardson (2000), who points out that, for example, distance education borrows concepts from other education fields—such as learning style research—and does not question the methods or research literature itself.

Riener and Willingham (2010) summarize the major review about learning styles quite accurately by mentioning that while students differ in terms of interests, knowledge and abilities, there is no evidence that they have different learning styles. Students have different preferences for how to learn, but the empirical proof that these preferences will positively influence learning results, has yet to be provided.

THE EMERGENCE OF THE DIGITAL LEARNER

One of the more recent developments related to discussions of learner characteristics has been the emergence of the concept of digital literacy and, more specifically, the digital learner. The discourse around young people and their technological fluency was popularized by futurists and
pundits such as Prensky (2001a), who coined the terms *digital natives* and *digital immigrants*, and Tapscott (1997, 2009), who coined the term *net generation*. According to this discourse, the generation born roughly between 1980 and 2000 has been profoundly influenced by the advent of digital technologies and the immersion in a digital and networked world to the point where, it is argued, they have developed unique characteristics that have a profound impact on how they learn. As a consequence, educators are urged to develop new approaches to teaching and learning and to make radical changes to our educational systems to accommodate these unique learners.

While Prensky and Tapscott have probably done the most to popularize this notion, many others have taken up the idea that we have a generation of learners who behave differently; they have different social characteristics, ways of using and making sense of information, ways of learning, and expectations about life and learning, all due to their exposure to digital technology (Howe & Strauss, 2000; Oblinger & Oblinger, 2005; Palfrey & Gasser, 2008; Prensky, 2001b, 2005). This discourse is particularly relevant to distance educators because, if one accepts the notion of the digital native, two of its most obvious implications are that we should be integrating more technology into our teaching and that the digital learner prefers online learning to traditional face-to-face teaching. However, the digital natives discourse is not supported by sound research and does not help explain learner preferences for modes of delivery nor their comfort or skills in using digital technologies for learning.

While there is no doubt that the use of ICTs is growing and that younger people tend to use digital technologies more than older people, there is a troubling lack of empirical support for the claims about the impact of this growing ICT use. The discourse around learners and digital technology is dominated by claims that emerge from non-scholarly literature. Some appear in the popular or lay press; others are found in proprietary research funded by and conducted for private business. Still others are in quasi-academic publications that have the appearance of academic or scholarly quality but are not informed by empirical research. More recently, a growing body of sound empirical research has developed that contradicts the key claims of the digital natives discourse.
Prensky (2001a, 2001b, 2005), Tapscott (1998, 2009) and, to a lesser extent, Palfrey and Gasser (2008) have all claimed that the ubiquity of digital technologies and young peoples’ intensive use of these technologies is affecting how they think, interact, and make sense of the world. The following assertion is typical of the claims in popular literature:

[T]oday's students think and process information fundamentally differently from their predecessors. These differences go far further and deeper than most educators suspect or realize. . . . They like to parallel process and multi-task. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They function best when networked. They thrive on instant gratification and frequent rewards. They prefer games to “serious” work. (Prensky, 2001a, pp. 1-2)

One of the more widely cited references in support of the claims about the distinct characteristics of digital natives is Howe and Strauss’ Millennials Rising: The Next Great Generation (2000). In it they state: “Over the next decade, the Millennial Generation will entirely recast the image of youth from downbeat and alienated to upbeat and engaged—with potentially seismic consequences for America” (p. 4).

Tapscott (2009) also makes some sweeping statements about digital natives and coined the term the net generation. He proposes what he calls his eight net generation norms: freedom, customization, integrity, scrutiny, collaboration, entertainment, innovation, and speed. Oblinger & Oblinger (2005) have probably done the most to legitimize the notion that this generation has unique personal and behavioural characteristics because their book was published by the well-known EDUCAUSE organization and made available as a free download. They echo much of what Howe & Strauss (2000) say about this generation. Drawing on the work of Prensky (2001a, b), Tapscott (1998), Seely-Brown (2002), and Howe & Strauss (2000), they argue that the net generation is digitally literate, connected, social, and has a preference for experiential learning and immediate feedback.

Until recently, there has been a largely uncritical acceptance of the discourse on digital natives. Other researchers, writers, and commentators have repeated the claims, which has helped to give the discourse a sense of

From the Back Door into the Mainstream 433
legitimacy. Even researchers who acknowledge the lack of empirical support for the generational argument continue to either frame the issue in generational terms or give prominence to the unfounded generational claims, which further entrenches the digital natives discourse (Bates & Sangrà, 2011; Corrin, Lockyer, & Bennett, 2011).

**Implications for Teaching, Learning, and Distance Education**

There is a distinctly prescriptive thread to the digital natives discourse. Tapscott (2009), for example, argues that we need to move away from what he claims is the dominant broadcast mode of education and incorporate more interactive, collaborative, and constructivist pedagogies and instructional designs. Prensky (2001a, 2001b) argues for greater use of gaming and game-based designs. Palfrey & Gasser (2008) take a more cautious line and urge educators to resist the temptation to implement radical changes. At the same time, however, they suggest that digital learners want more team-based, collaborative, and game-based learning. Oblinger & Oblinger (2005) also argue for this but go further and recommend structured learning experiences that are socially meaningful and use visual and kinesthetic approaches. The dominant theme in all these prescriptions for change driven by the digital generation is the need for greater use of digital technology and a rejection of traditional face-to-face modes of teaching.

There is something intuitively appealing about these prescriptions for educational change. It does seem to make sense that being immersed in digital technology almost from birth should have some impact, and that if today’s students are indeed learning differently then we should consider new approaches to teaching and learning. However, in order to accept the calls for change we have to accept the underlying assumption that there has been a generational change in learners and, to date, there is no convincing evidence to support that.

**Digital Learner Research**

Bennett, Maton, and Kervin (2008) conducted one of the first comprehensive reviews of the research on digital learners and concluded the issue is
much more complex than is being portrayed in the popular media:

While technology is embedded in their lives, young people’s use and skills are not uniform. There is no evidence of widespread and universal disaffection, or of a distinctly different learning style the like of which has never been seen before. We may live in a highly technologized world, but it is conceivable that it has become so through evolution, rather than revolution. Young people may do things differently, but there are no grounds to consider them alien to us. Education may be under challenge to change, but it is not clear that it is being rejected. (p. 783)

More recently, after reviewing the literature and conducting a study at the BC Institute of Technology in Canada, Bullen, Morgan, and Qayyum (2011) concluded that generation is not the issue:

While our study found that the use of some ICTs was ubiquitous (e.g., mobile phones, e-mail, and instant messaging) we did not find any evidence to support claims that digital literacy, connectedness, a need for immediacy, and a preference for experiential learning were characteristics of a particular generation of learners. (p. 18)

These are just two of many studies that reach conclusions that are at odds with the dominant discourse around young people and their technology skills and what this means for education. Others studies and reviews include Bekebrede, Warmelink, and Mayer, (2011); Hargittai (2010); Jones and Cross (2009); Kennedy et al. (2007); Kennedy et al. (2009); Margaryan, Littlejohn, and Vojt (2011); Pedró (2009); Reeves and Oh (2007); Romero, Guiter, Bullen, and Morgan (2011); van den Beemt, Akkerman, and Simons (2010), and Friesen (2012). The common theme to all these studies is that it would be unwise to assume that learners of a particular age all possess sophisticated digital technology skills, are demanding an end to face-to-face teaching, and want more technology and online learning. Selwyn (2009) highlights the significance of this clear disconnect:

The onus perhaps now falls on academic communities of information scholars and other social scientists to better promote empirically-grounded and socially-aware portrayals of the complexities of young people’s uses of technology—thus providing realistic alternatives to the
discourse of the digital native and the attendant public and political concerns that surround it. (p. 376)

What does this mean for distance educators? It reinforces the point made earlier in this chapter about the importance of context and of doing a proper analysis of the needs and characteristics of learners and avoiding the temptation to rely on generalizations. Pratt (1988) provided a powerful response against the prevailing orthodoxy about adult learners and argued persuasively that andragogy is a relational construct. The same can be said about digital fluency. Bennett, Maton, and Kervin (2008) aptly put it this way:

Research . . . shows that students change their approach to learning depending on their perception of what a task requires and their previous success with a particular approach. . . . To attribute a particular learning style or even general preferences to a whole generation is thus questionable. (p. 780)

PREVIOUS EMPIRICAL STUDIES

As early as 1987, Börje Holmberg recommended in his seminal article “The Development of Distance Education Research,” that research was required to better understand the characteristics of distance students, their motivation to study, their milieu and their needs, in terms of clarifying the research agenda for the field of open and distance learning (Simonson, Schlosser, & Orellana, 2011).

Investigating distance learners in terms of their characteristics, the relationships between these above-mentioned factors, and their impact on student achievement in distance learning programs has developed into a major focus of study (Thompson, 1998). A literature review by Zawacki-Richter, Bäcker, and Vogt (2009), covering the many aspects of distance education revealed that 16% of the papers included in the review (N=695) examined learner characteristics. These results are relevant because, in the wide field of distance education, learner characteristics will be an even more important topic for the future, since today there are not only more students, but they are indeed more heterogeneous than ever (Schuetze & Slowey, 2002; Wolter, 2012; Guri-Rosenblit, 2011). Thus, we need more research efforts to help us develop more effective distance education programs.
Demographic, socio-economic, and other learner characteristics are closely linked to student success. Since the early 1990s numerous researchers have reported a positive correlation between achievement and the age of students (e.g., Dille & Mezack, 1991; Souder, 1994); distance learners and non-traditional students tend to be more intrinsically motivated (Thompson, 1998); more autonomous learners (Johnston et al., 2002); more self-efficient and more organized (Harlow, 2006); and their work commitment strengthens their persistence (Kemp, 2002). Motteram and Forrester (2005) investigated the experiences of online students in distance learning programs and concluded that a broad support approach (e.g., technical, personal, and motivational) is needed to address their diverse needs.

Barriers for successful students often cannot be attributed to a single factor and even self-directed learners experience many barriers (Grace & Smith, 2001). Flexible off-campus learning is only effective if learners are disciplined and consistent in their learning methods (Samarawickrema, 2005). According to Richardson and Newby (2006), the main variables related to student motivation and learning strategies are: gender, age, prior online learning experiences, and program focus. Personality traits such as being introverted or extroverted can have an important impact on the instructional design of study programs, for example, extroverts are negatively influenced through lack of contact with a teacher, while introverts are not (Offir, Bezalel, & Barth, 2007).

Although there are differences in the composition of the student body in different countries and distance teaching institutions, distance learners in tertiary education still share some characteristics that set them apart from students in conventional higher education. The most obvious of these are age, family, and socio-economic situation. Table 16.1 shows some of the published data from three single-mode distance teaching universities, the British Open University (OUUK)\(^3\), the German FernUniversität (FeU)\(^4\), and the Canadian Athabasca University (AU).\(^5\)

\(^4\) http://www.fernuni-hagen.de/universitaet/profil/zahlen/index.shtml
\(^5\) http://www2.athabascau.ca/aboutau/glance.php [16.1.2012]
Table 16.1 Distance learner profile data from three open universities.

<table>
<thead>
<tr>
<th></th>
<th>OUUK</th>
<th>FeU</th>
<th>AU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>31 (median)</td>
<td>29–35 (main age group)</td>
<td>29 (average) 37 (average)</td>
</tr>
<tr>
<td>age groups</td>
<td>under-</td>
<td>graduate</td>
<td>age groups</td>
</tr>
<tr>
<td>OUUK</td>
<td>graduate</td>
<td></td>
<td>FeU</td>
</tr>
<tr>
<td>17 and under</td>
<td>3%</td>
<td>0%</td>
<td>17 and under</td>
</tr>
<tr>
<td>18–24</td>
<td>14%</td>
<td>4%</td>
<td>18–24</td>
</tr>
<tr>
<td>25–34</td>
<td>29%</td>
<td>31%</td>
<td>25–31</td>
</tr>
<tr>
<td></td>
<td>32–38</td>
<td>25.8%</td>
<td></td>
</tr>
<tr>
<td>35–44</td>
<td>28%</td>
<td>36%</td>
<td>39–45</td>
</tr>
<tr>
<td>45–54</td>
<td>16%</td>
<td>21%</td>
<td>46–52</td>
</tr>
<tr>
<td>55–64</td>
<td>7%</td>
<td>6%</td>
<td>53–59</td>
</tr>
<tr>
<td>65 and over</td>
<td>3%</td>
<td>2%</td>
<td>60 and over</td>
</tr>
<tr>
<td>Paid work</td>
<td>&gt; 70%</td>
<td>ca. 80%</td>
<td>81%</td>
</tr>
<tr>
<td>Gender</td>
<td>proportion of women</td>
<td>61% (u) / 50% (g)</td>
<td>46%</td>
</tr>
</tbody>
</table>

In order to illustrate the profiles and socio-economic background of distance learners in more detail, the following section draws upon recent survey data collected at the German FernUniversity in Hagen as part of a research project on the situation of students enrolled in their third term in the winter semester 2010/11 (von Prümmer, 2012). The survey replicates a study carried out in 1986 as an internationally comparative project on the situation of women and men in distance education (cf. Kirkup & von Prümmer, 1990; von Prümmer, 2000).

Of the 1,681 students who participated in the online survey, 56% were female, i.e. women were over-represented compared with all FeU students (46%). At the time of the survey the average age of the students was 35.4 years with a range from 22 to 73 years. Women on average were slightly younger (34.8 years) than their male counterparts (36.1 years). With a mean age of 34.8 years undergraduate students were one year younger than students in master and doctoral programs (35.7 years).
Family Situation and Social Selectivity

Students’ family situation reflects the fact that predominantly these are not young people entering university directly after completing their secondary schooling. Thirty-four per cent of the women and 26% of the men are parents, and most of these live as a family with their partner and one or more children. Most of the single parents (n=74) are women (89%). A total of 493 parents (29%) provided information about the number of children in their household: forty per cent have one child, 43% have two children, and 17% have three or more children. A multiple response question about the age of the children shows that four out of ten were under school age, 18% babies and toddlers up to 3 years of age, 20% from 3 to under 6 years old. Forty-seven per cent of the children were of school age, 31% from 6 to under 14 years, 16% from 14 to under 18 years. Fourteen per cent of the children living with their distance education parent(s) were 18 years and older at the time of the survey.

It is a well-established fact that access to higher education is “socially selective, i.e., certain groups are over-represented or under-represented” in the student population (Orr, Schnitzer & Frackmann, 2008, p. 56) and research has shown that “fundamental social disparities have proven to be relatively stable” (Isserstedt, Middendorf, Kandulla, Borchert, & Leszczensky, 2010, p. 9). Open universities were established with the explicit aim of improving equity of access by making it possible to pursue a degree later in life. For instance, according to its mission statement, AU “is dedicated to the removal of barriers that restrict access to and success in university-level study and to increasing equality of educational opportunity for adult learners worldwide” and the OUUK’s mission is to “promote educational opportunity and social justice by providing high-quality university education to all who wish to realise their ambitions and fulfil their potential.”

One would expect that the social composition of the student population should therefore yield a higher proportion of students from backgrounds usually under-represented in tertiary education institutions. In fact, this was shown to be true for students of the (West) German FeU 25 years ago, documented both in the student statistics and from a survey of women and men studying at a distance. Although students from a working class background

6 http://www2.athabascau.ca/aboutau/mission.php [17.01.2012]
7 http://www8.open.ac.uk/about/main/the-ou-explained/the-ous-mission [17.01.2012]
were under-represented compared to the general population, their percentage was higher at the FeU than at traditional German universities (von Prümmer, 1997).

Figure 16.1 Socio-economic status of distance education students (FeU, 2011; N=1,681) compared with students at conventional universities (HIS, 2009; N=16,370).

The construct of the social background was introduced in 1982 for the German social census and is an indicator that measures correlations between economic situation, educational background of the family, and student behaviour. According to this point of view, the educational attainment and occupation of students’ parents can be seen as a measure of the social make-up of the student body (Orr, Gwosć & Netz, 2011).

Figure 16.1 indicates the differences between students from the FeU and campus-based traditional university students from the 2009 HIS survey (Isserstedt, Middendorf, Kandulla, Borchert, & Leszczensky, 2010). While the mid-tier of the high- and middle-status groups seems quite similar, in the upper and lower groups the differences become clearer. While 36% of the regular students share an upper socio-economic family background, only 25% of the FeU students do. It is almost trivial to say that universities recruit their students largely from academic backgrounds where at least
one parent has completed tertiary education. The 2009 HIS survey confirms “stability over time” of the selective participation rates according to educational background (Isserstedt et al., p. 124). Half the student population in the survey (51%) comes from families where at least one parent has a degree. A quarter of the students (24%) come from families where both parents have completed tertiary education. Again, the FeU survey shows a lower proportion of students from such highly educated family backgrounds. 41% of FeU students come from an academically educated family background where at least one parent has obtained a degree.

Employment

As is usual for distance students, the majority of survey participants are in paid work, either full-time (57%) or part-time (26%). Again, the answers show familiar gender patterns as 72% of the men but only 45% of the women are in full-time paid work. The students who are not earning a salary are registered as unemployed (2.7%), pensioners (1.7%), on parenting leave (2.7%), or doing unpaid family work (4.0%). Women are by far more likely to take parenting leave and to take care of their families and homes full-time without pay, making up 93% of each of these groups.

Most distance students encounter problems in their studies because of the demands of their paid work. A multiple-response question shows that only one quarter of the respondents in paid work (24%) can claim to spend as much time on the job as their contract requires. Eighteen per cent have to put in significantly more hours always, and 22% have to do this at foreseeable intervals. Thirty-eight per cent face additional expenditure of time at irregular and often unexpected intervals. A few respondents occasionally encounter situations where they have to spend less time on their paid work than expected (4.0%) and an even smaller group always works fewer hours (0.8%). This means that the majority of distance students must expect to deal with situations where the demands of their paid work interfere with their study schedules and affect their ability to meet deadlines.

Enrolment Data and Motivation to Study

The majority of the survey participants (74%) are not newcomers to tertiary education. Three out of ten (29%) have previous study experience without gaining a degree and 45% came to their distance studies already
having earned a college or university degree. Considering Bachelor and Masters students only we find expected differences as nearly all (97%) of the students in a Master’s program but less than one third (30%) of the Bachelor students had already completed a degree. Two thirds (64%) of the respondents pursue their distance studies part-time, one fifth (21%) do so full-time. The others are enrolled as continuing education students (3.4%) or as visiting students (11.5%) who are registered in a degree course at another university.

Students were asked to rate, on a scale of 1 (=very important) to 5 (=unimportant), a list of 21 study goals with respect to the relevance these had for their decision to enrol. The highest ratings went to work and career-related items and to items reflecting a wish for personal development. With a mean of $\bar{\theta} = 1.70$ the most important study goal is the opening of “new occupational perspectives” followed by an “enjoyment of new areas of knowledge” ($\bar{\theta} = 1.79$), gaining a “higher qualification for my job” ($\bar{\theta} = 1.82$) and a “wider knowledge in my area of speciality” ($\bar{\theta} = 1.88$). A factor analysis sorted the study goals into four areas: Factor 1 comprises items related to career and employment; Factor 2 items related to acquiring knowledge. These two factors comprise 15 of the 21 items, which underlines the important role these considerations played in students’ decisions to study. Factor 3 deals with issues of (self) esteem; and Factor 4—in the broadest sense—with making a new start.

Different answering patterns are found by comparing first-time students with students who had already gained a degree before enrolling. All but two items are rated more highly by students without previous study experience. Not surprisingly, the differences are greatest with respect to Factor 4 as the items here are less important for people who already possess a degree. First-time students are more in need of gaining their “initial professional qualification” ($\bar{\theta} = 2.66$ vs. 2.91) and making use of distance studying for “testing my ability to study,” something that the postgraduates have obviously already succeeded in doing ($\bar{\theta} = 2.65$ vs. 3.45).

The study goals that lead students to embark on tertiary education at a time in their lives when most of them are gainfully employed (83%), in their mid-thirties ($\bar{\theta} = 34.8$ years), and living with a partner or in a family situation (71%) are linked with their decision to enrol. The most often-quoted reason is the freedom from classroom schedules and flexibility of time. Eighty-four per cent of the respondents agreed that this was a consideration
in their decision to enrol at the FeU. While this reason is a fairly sweeping statement, which could refer to any aspect of a student’s life, the next most-often chosen items refer specifically to work-related aspects. Three quarters of the FeU students cannot afford to give up their job in order to study at a traditional university but “must continue to earn money” (75%) or to fulfil their “work commitments” (75%). Just over half of the respondents became distance students because they did not want their part-time studies to interfere with their job, which was their “first priority” (53%), or feared that an interruption of their career would jeopardize their future prospects (52%).

**Figure 16.2**  Student reported reasons for studying at a distance at FernUniversität.

Other reasons for studying at a distance are directly tied to students’ private lives. Considering household composition we find—as might have been expected—that 83% of respondents with children were prevented by family commitments from attending a traditional university, and that the percentage is higher among mothers (88%) than fathers (79%).

**Changing Student Profiles at Campus-Based Universities**

In order to investigate the hypothesis that the profiles of traditional students at campus-based universities have become more and more diverse
and might now be comparable to non-traditional students such as those described above who study at the FernUniversität, students at three conventional German universities—the Universities of Oldenburg (UOL), Duisburg-Essen (UDE), and Dortmund (TUD)—were surveyed during the winter term 2009/2010. Major findings with regard to the student profiles, their family and employment situation are summarized in table 16.2.

Table 16.2 Survey of undergraduate students at three conventional German universities (N=3,687).

<table>
<thead>
<tr>
<th></th>
<th>Total N=3,687</th>
<th>UDE N=1,300</th>
<th>TUD N=1,397</th>
<th>UOL N=990</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>22.9</td>
<td>22.8</td>
<td>22.7</td>
<td>23.4</td>
</tr>
<tr>
<td>proportion of women</td>
<td>47%</td>
<td>40%</td>
<td>45%</td>
<td>61%</td>
</tr>
<tr>
<td>migration background</td>
<td>27%</td>
<td>32%</td>
<td>31%</td>
<td>16%</td>
</tr>
<tr>
<td>parents without higher education degree</td>
<td>63%</td>
<td>63%</td>
<td>62%</td>
<td>66%</td>
</tr>
<tr>
<td>second chance education</td>
<td>10%</td>
<td>10%</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>without general qualification for university entrance</td>
<td>5%</td>
<td>6%</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>own children</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>caring for family members</td>
<td>7%</td>
<td>9%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>apprenticeship + work experience</td>
<td>16%</td>
<td>12%</td>
<td>13%</td>
<td>26%</td>
</tr>
<tr>
<td>employed &gt;15 hrs/week</td>
<td>60%</td>
<td>62%</td>
<td>60%</td>
<td>58%</td>
</tr>
<tr>
<td>de-facto part-time student (&lt; 25 hrs/week)</td>
<td>24%</td>
<td>29%</td>
<td>22%</td>
<td>18%</td>
</tr>
<tr>
<td>wish for part-time study</td>
<td>19%</td>
<td>22%</td>
<td>18%</td>
<td>15%</td>
</tr>
</tbody>
</table>


The authors also investigated the differences between the actual study conditions and the expectations about these conditions. On a Likert scale ranging from 1 (not important at all) to 5 (very important), students were
asked to rate different aspects of the study conditions. The variance analysis depicted in figure 16.3 shows the specific areas in which major differences between the actual and the expected study conditions were found (i.e., the difference between demand and provision).

**Figure 16.3** Scatterplot for the dimensions of student expectations (current state vs. target state).

In the top right corner of figure 16.3 we find aspects with a high demand that are fulfilled to a high degree (e.g., 12=approachability of faculty). Those areas at the bottom of that figure are interesting, showing high expectations that the students perceive as not being met to a great extent by the campus-based institution: 2=integration of practical knowledge, 3=appropriate number of students per class, 5=application of work-related experience, 6=opportunities for part-time work, 7=independent work, 8=self-directed learning, 9=project work, 10=flexible assessment, 14=recognition of prior learning. The detailed results of the variance analysis can be found in table 16.3.
Table 16.3 Dimensions of student expectations.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Target State</th>
<th>Current State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. open access</td>
<td>3.96</td>
<td>3.51</td>
</tr>
<tr>
<td>2. integration of practical knowledge</td>
<td>3.26</td>
<td>2.47</td>
</tr>
<tr>
<td>3. appropriate number of students per class</td>
<td>4.16</td>
<td>2.85</td>
</tr>
<tr>
<td>4. unusual hours</td>
<td>2.45</td>
<td>2.65</td>
</tr>
<tr>
<td>5. application of work-related experience</td>
<td>3.18</td>
<td>2.50</td>
</tr>
<tr>
<td>6. opportunities for part-time work</td>
<td>4.03</td>
<td>2.85</td>
</tr>
<tr>
<td>7. independent work</td>
<td>3.70</td>
<td>3.02</td>
</tr>
<tr>
<td>8. self-directed learning</td>
<td>3.62</td>
<td>2.90</td>
</tr>
<tr>
<td>9. project work</td>
<td>3.78</td>
<td>2.93</td>
</tr>
<tr>
<td>10. flexible assessment</td>
<td>4.27</td>
<td>2.39</td>
</tr>
<tr>
<td>11. contact person</td>
<td>4.13</td>
<td>3.03</td>
</tr>
<tr>
<td>12. availability of lecturers</td>
<td>4.26</td>
<td>3.66</td>
</tr>
<tr>
<td>13. info study organisation</td>
<td>4.49</td>
<td>3.08</td>
</tr>
<tr>
<td>14. recognition of prior learning</td>
<td>3.67</td>
<td>2.32</td>
</tr>
</tbody>
</table>

These articulated needs and demands are those we would usually expect from non-traditional students, which supports the hypothesis that the profiles of traditional and non-traditional are increasingly converging—in other words, the previously clear boundaries between traditional and non-traditional are now becoming blurred.

CONCLUSION AND PERSPECTIVES FOR FUTURE RESEARCH

Access to education and flexible learning opportunities are the key to lifelong learning. Distance education and educational technologies provide powerful tools for fostering participation in formal, informal, and non-formal educational settings. The traditional distance education student who needs to juggle various job and family commitments is moving from the back door into the mainstream. It is a political goal to further increase participation of so-called non-traditional adult students in order to serve the needs of disadvantaged groups. This is a matter of social justice, equity, and ethics (cf. chapter 1). Committed to this goal, educational institutions must
respond to the needs of an increasingly diverse student body. A prerequisite for being able to design appropriate student support systems (cf. chapter 11) is to be well informed about the multiple profiles, characteristics, and needs of this diverse student body.

Since the target groups will become more and more heterogeneous, a widespread research approach is needed to embrace their diverse needs. It is not only about new student groups like the non-traditional students mentioned, but also about how to implement lifelong learning in higher education and society itself. It remains challenging to describe exactly what if any distinctive characteristics can be generalized to all characteristics that define non-traditional students. This becomes even more difficult when considering internationally comparative perceptions (Wolter, 2012), particularly in order to compare various national proportions of non-traditional students. Regarding the definition of lifelong learners a widely accepted approach seems to be essential in order to enable international comparisons.

Other aspects that should be taken into account are the various educational qualifications, skills and competencies that lifelong learners bring to their studies. Therefore, the recognition and accreditation of prior learning and skills is an important pathway in widening access to higher education (cf. Conrad, 2011). The improvement of the quality, permeability, and effectiveness of systems of education and training is a key priority within the European Union’s Copenhagen Declaration (2002), which advocates common principles for the recognition and accreditation of learning outcomes, especially for informal and non-formal learning. In response to this process a decision by the German Conference of Education Ministers (KMK, 2002; 2008) addressed the recognition of non-academic learning outcomes in higher education.

This decision laid the foundations for the accreditation of vocational learning outcomes by stipulating that “knowledge and skills acquired outside the higher education system can be accredited for a higher education program on the basis of a . . . level assessment when their content and level is equivalent to the part of the study program that is to be replaced.” According to the KMK decision, a maximum of 50% of a higher education program can be replaced with knowledge and skills acquired elsewhere. However, in order to implement prior learning accreditation and recognition to improve permeability, it is very important to develop and apply
validated instruments that comply with academic standards (Müskens, Tutschner, & Wittig, 2009).

Regarding the question about learning styles as a part of a distance learning research agenda, Coffield, Moseley, Hall, and Ecclestone (2004) highlight the following implications for rigorous research on that topic:

[T]he research field of learning styles needs independent, critical, longitudinal and large-scale studies with experimental and control groups to test the claims for pedagogy made by the test developers. The investigators need to be independent—that is, without any commitment to a particular approach—so that they can test, for instance, the magnitude of the impact made by the innovation, how long the purported gains last, and employ a research design which controls for the Hawthorne Effect. (p. 143)

A closer look at the relationship between motivation and the learning setting, whether online or on-campus, should also be addressed: “To be able to reap the full benefits of distance education, it is important for educators to match technology with the background and needs of the learners if education is to be effective” (Sankaran & Bui, 2001, “Conclusion”, para. 5–6).

We also know that, increasingly, learners will be coming to distance education with experience and skills in using digital technologies. As we cautioned earlier, however, we should not assume that all younger students are fluent in the use of these technologies, particularly in using them for educational purposes. Research shows this not the case and that defining learner characteristics based on generation is not helpful. Instead we need further research that seeks to understand how learners are using digital technologies in different aspects of their lives and if and how academic and social uses are related.

Current research discussed in this chapter supports the hypothesis that in some ways traditional and non-traditional students are beginning to converge in terms of their expectations and needs regarding their study, and that the old dichotomy of traditional/non-traditional students is no longer valid (Maschwitz & Vajna, 2011). However in other ways the student body is diverging. Students with diverse backgrounds, competencies, needs, and expectations are today’s and tomorrow’s lifelong learners: “Should this group stay within the focus of education politics—and this is the explicit goal of the European education efforts—it will become necessary to develop
institutions of distance education” (Alheit, Rheinländer, & Wastermann, 2008, p. 599) and these distance education institutions must learn to cope with students from diverse backgrounds, expectations, and work habits.

REFERENCES


From the Back Door into the Mainstream 449


