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Education for elders in the U.S. Opportunities and challenges in the context of the demographic change*

1 The demographic change in the U.S. and its impact on adult and senior education

In the next decades a societal change, caused by a continuous demographic shift, is imminent for the USA. Compared to Germany, where the birth rate is likely to stagnate at a low level, the effect of immigration into the United States is more pronounced. Here not only the proportion of elderly in the total population will increase, but also the total population itself. These developments will bring great social and political challenges that call for appropriate action. Looking at the increasing number of mature adults it is especially important to keep in mind that the remaining time after retirement is not only the rest of the life, but rather an important and distinctive life stage which can last easily 20 to 30 years.

This report is dealing with the question on how the demographic change is progressing in the U.S. and how it will impact senior education. In this context, future elderly cohorts as well as educational barriers are presented and discussed. Furthermore, the U.S. senior education system will be explained, common institutions presented, and geographical differences discussed. Since competency determination plays an important role for an effective design of education, the current status of the Program for the International Assessment of Adult Competencies (PIAAC) in the U.S. is illustrated as well as the results of the 2003 Adult Literacy and Life Skills Survey (ALL).

1.1 The demographic development in the U.S.

Similar to Europe, the U.S. is facing a rapidly changing population. A decline in fertility, increased life expectancy, and migration will cause a population growth of 42 percent by the year 2050, representing an increase from 310 million to 439 million people (cf. Hayutin/Dietz/Mitchell 2010, 1). The elderly population experiences the strongest growth and its share on the population will increase by 120 percent between the years 2010–2050. In comparison, the proportion of children under the age of 15 will increase by 35 percent and the proportion of adults 15–64 years only by 28 percent (cf. ibid., 11).

With regard to the population structure, the United States will transform from developing a pyramid-like structure with a broad base of young people to a cube-like form in which all ages are evenly distributed (cf. ibid., 10). According to these

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developments, the United States are regarded as a middle-age country (Hayutin 2010a), while Germany needs to be characterized as an old(est)-age country (ibid.). The largest growth of the elderly population will take place between the years 2011 and 2029, when the so-called baby boomers, who were born between 1946 and 1964, turn 65 years (cf. Hayutin/Dietz/Mitchell 2010, 17). A reason for the strong growth of the elderly population in modern industrialized countries is the increased life expectancy due to medical advances, improved hygienic care, and a reduction in child mortality. A child born today has an average life expectancy of 78 years. Within the next 40 years, according to predictions by the U.S. Census Bureau, the average life expectancy for both sexes at birth will be 83 years (cf. Hayutin/Dietz/Mitchell 2010, 12). Life expectancy at age 65 has increased since 1950 for men and women by four years. In 2050, a 65 year old male can expect to live until an age of 84 and women until 86. Increased life expectancy also results in an extended time spent in retirement. Between 1950 and 2000 the corresponding time increased for men from 8 to 19 years. Furthermore, retirement is now also marked by a high quality of life and good health (cf. ibid., 62).

Characteristic for the United States is its cultural diversity, which needs to be considered for current and especially future educational planning and organization. The Hispanic population in the U.S. will have a massive increase within the next 40 years. Projections assume that this part of the population will more than double from its current 50 million (2010) to 133 million (2050), accounting to 30 percent of the total population in 2030. In addition, the Asian population will double to 33 million in 2050, which thus corresponds to an increase in the relative share on the total population of 4.5% (2010) to 7.6% (2050). The population growth of the black population of the United States will experience an absolute growth of 33 million until 2050, but will stagnate at a relative population percentage of 12 percent. In contrast, the white non-Hispanic population with about 200 million will remain relatively stable, but its share of the total U.S. population will drop from 65% (2010) to 46% in 2050 (cf. U.S. Census Bureau 2008c, 23ff.).

The aging of the U.S. population will effect every ethnic group, and higher age will be characterized by an increasing diversity. The proportion of the white non-Hispanic population 65 years and older will grow from the current 32 million to 50 million in 2030 and afterwards stagnate until 2050. The Hispanic older population on the other hand will increase from three million in 2020 to 18 million in 2050, accounting for 20 percent of the older population of the United States. Although the relative proportion of Hispanics in the elderly population of the United States is increasing (the elderly share of 7% in 2010 will rise to 20% in 2050), this ethnic group is on average still younger than the overall U.S. population. The older black population 65+ will grow over the next 40 years by about seven million and the Asian population of the same age by about six million (cf. Hayutin/Dietz/Mitchell 2010, 23ff.).

According to these statistical facts and predictions, the ethnic diversity in the United States will continue to increase and produce in 2042 a *majority minority* (ibid., 5), which means that more than half of the US-American population will be Hispanic or non-white. Good knowledge of this development and the relationship between race and status of health, life expectancy, income level, and educational attainment is a necessity for targeted age policy.

1.2 The demographic change as a challenge for adult and senior education

The described demographical scenario creates especially for the (older) adult education new tasks and challenges. For instance, future generations will have high requirements on educational offerings due to an increased overall educational level (cf. Tippelt/Schmidt/Kuwan 2009, 45). Therefore, adult education must face the task of developing new forms and ways to fulfill these requirements.

As discussed, the U.S. is characterized by high diversity, which will also be reflected in future elderly cohorts. Besides the development of educational programs which are approaching this multifacetedness in a culturally sensitive way, individual skills such as intercultural competence, and knowledge of the particularities of older learners will have to be key qualifications of staff and teachers in the institutions. It is also necessary to face the fact that there are significant differences in participation in formal education between the different ethnic populations. According to the Federal Interagency Forum on Aging, ethnic minorities compared to whites are often characterized by a poorer health, lack of health care as well as lower income and education (cf. Federal Interagency Forum on Aging 2006). Also in the largest educational institutions in the U.S., which will be discussed in detail in the next chapter, most of the students are white and other ethnic backgrounds under-represented. For example, an internal member evaluation (n=458) of the UC Berkeley's Osher Lifelong Learning Institute (OLLI@Berkeley), which was conducted in Spring 2012, showed that 92.7 percent of the respondents are white and only 7.3 percent have an ethnic background. According to these results, a broader involvement of all population groups appears as a major future task for the senior education.

In addition, it will be important for the current adult and senior education, to respond adequately to the current housing change in the U.S. According to the U.S. Census Bureau, the total number of households has increased since 1970 from 63 million to currently 111 million (cf. U.S. Census Bureau 2008c, 31ff.). 30 million of these 48 million new households are located in suburban areas – a suburbanization trend, which is recognizable since 40 years due to the spread of automobiles. This trend is also observable in Germany. Young families, as well as those over 65, enjoy the idyllic environment of suburban areas. Thus, compared to 1970 the relative proportion of older households 65+ in suburbs has increased from 5% to about 9% in 2007, while at the same time part of elderly households in rural areas has dropped from about 8% (1970) to 5% (2007). Large cities show a weaker decline of elderly

households from around 6% in 1970 to approximately 5% in 2007 (cf. U.S. Census Bureau 1975, 1989, 2003, 2004a, 2006, 2008a33). It is an interesting fact that most of the major educational institutions for seniors, such as the Osher Lifelong Learning Institutes, have their headquarters mainly located in cities near to universities and only a few offerings in the suburban areas. Taking into account that the elderly part of the population is increasing and that there is a decline of mobility in old age, an expansion of appropriate educational options or even a move of institutions into these areas seem to make sense. Also, an extension of online education for the senior education should be considered at this point.

The increased life expectancy and therefore increasing percentage of very old adults age 80+ with a better health and higher activity level than the preceding cohorts, are another new challenge for future senior education. In the last decades the fraction of very old people of the U.S. population rises by about one percent every 20 years – a trend which will most likely continue (cf. Human Mortality Database).1 For a better involvement of mature adults and frail elders in education, this target group needs to be explored, as well as innovative and targeted offerings have to be developed to match their special living conditions. An exemplary response to this request is the „Fourth Age salons" of the OLLI@Berkeley, which will be discussed in the following chapter.

2 Older adult education in the USA

2.1 Terminology and state of the art

Terminologies describing education in old age are controversially discussed in Germany as well as in the United States. Terms like, e.g. late-life education, educational gerontology, third age education or learning in later life, can be found in the English literature and educational practice. Also the term lifelong learning is widely used. In Germany lifelong learning describes all kinds of educational processes as well as the pursuit of knowledge during a lifetime. This is in contrast to the U.S. where the term mostly describes formal education of the elderly. This inconsistent usage of the terminology and the rather small number of recent scientific publications on education for older adults in the United States seems to imply that older adult education is currently only getting little scientific attention. Also Kim/Merriam (2004, 442) confirm this assumption to some extent by concluding that only a few American studies on the educational motivation of seniors exist (cf. Adair/Mowesian 1993; Boshier/Riddell 1978; Brady/Fowler 1988; Bynum/Seaman 1993; Furst/Steel 1986; O'Conner 1987; Peterson 1981; Romaniuk/Romaniuk 1982; quoted by Kim/Merriam 2004). The research project „Reinvesting in the Third Age:

1 Cf. URL: www.mortality.org/cgi-bin/hmd/country.php?cntr=USA&level=1

Older Adults and Higher Education" of the American Council on Education, which was conducted in 2007 and 2008, is also supporting this hypothesis by identifying that a thorough knowledge of the older students and their educational motivations is non-existing (cf. American Council on Education 2007, 3). Nevertheless, more recent public efforts acknowledge the need for learning in the senior age in response to the demographic changes and the corresponding aging of the society. For instance, the American Society on Aging which is one of the largest U.S. organizations dealing in a multidisciplinary way with old age and aging, just put lifelong learning on its work agenda for the coming years.

2.2 Older adult educational institutions in the U.S.

The educational options for seniors in the United States can be a divided on the one hand into in the university and college affiliated educational programs, and on the other hand in non-university related more community-based institutions. In addition to that, private providers exist and operate mainly on a non-profit basis. The main differences between these forms of education are primarily different difficulty level and pricing structures. University or college affiliated institutions offer courses on a very high intellectual level and with higher participation fees while the other institutions make education accessible to people of all educational backgrounds and available for every budget. On the next discrimination level, offerings for older adults can be classified in age-heterogeneous and age-homogeneous institutions. Age-homogeneous institutions offer formal education exclusively for older adults, while age-heterogeneous educational institutions are open to adults of every age.

The economic crisis caused severe financial cuts in the U.S. education system over the last years. As a result, many adult or senior education providers in the U.S. had to cut back their programs and/or increase their tuition fees. In addition to cuts in the curriculum of community colleges, especially the local adult schools suffered a lot from these cut backs and affected the elder educational sector strongly. Therefore, most of the institutions discussed in the following are funded directly with participation fees, donations or endowments.

In comparison to younger cohorts, the generation 65+ has the lowest participation in formal education in the U.S. Results of the National Center for Education Statistics showed that 55 percent of the adults between 41 and 50 years, 41 percent of the 51 to 65-year-olds, and only 22 percent of seniors over 65 years are participating in education (cf. National Center for Education Statistics 2004, quoted in Duay/Bryan 2008). However, a research work for the German Institute for Adult Education (DIE) in 2010 which was conducted by the author as well as own field experiences indicate that education for the elderly in the U.S., particularly in California, has a high social value. Even if the scientific interest seems to be small, a large variety of programs and initiatives exist, which are trying to offer innovative and creative education to seniors of all social classes. It is interesting to note that a strong involvement of the

students themselves in educational processes can be observed in many places. In this regard it is also noteworthy to mention that most of the often highly educated elders act with great self-esteem in educational processes. A possible explanation for the high density of programs in California might be the vicinity to many prestigious universities, including the University of California at Berkeley, Stanford University, and the University of California at Los Angeles.

2.3 Age-homogeneous older adult education institutions

Among the largest age-homogeneous senior education institutions in North America are the Lifelong Learning Institutes (LLI), which were founded in 1962 in New York City and are connected to local universities and colleges (cf. Kim/Merriam 2004, 442). The LLIs typically have a very challenging curriculum and put emphasis on self-determination and involvement of the older participants in the teaching and learning process. Many social activities help to build a collegial and communicative learning community that reminds more of a „Learning Club" than an educational institution. Currently, more than 200 of these institutions are existing in the U.S. 119 of these are Osher Lifelong Learning Institutes (OLLIs), which were founded in 2001. Today, the OLLIs have about 70,000 members across the U.S. The typical OLLI participant can be characterized as white, with a higher than average income level, and at least a college degree (cf. American Council on Aging 2007, 13). Depending on the organizational structure, either external experts and scientists or internal volunteers are responsible for the teaching. Therefore, the OLLIs can be divided on the one hand into institution-driven organizations which have a permanent staff, and on the other hand into the volunteer-led member-driven institutions. An institution-driven example is the UC Berkeley's Osher Lifelong Learning Institute (OLLI @Berkeley)[2] which is one of the biggest OLLIs in the U.S. (approximately 1,300 members). Besides a broad variety of highly innovative and creative seminars, workshops, interest groups, and social gatherings the institute initiated a research section in Fall 2011. Education and learning in old age and its impact on longevity is approached in a multi-dimensional way with help of well-known scientists and experts.

In addition to the mentioned OLLIs, another important educational institution focusing on the age bracket 50+ is OASIS, which was founded in 1982. A key element is the intensive collaboration with national institutions, organizations, and companies to place seniors, e.g., as teachers or mentors in local schools (cf. Kerz 2012). Currently the institution offers in 40 cities a variety of high-level art, technology, literature, politics, sports, and health seminars, which are mostly taught by external experts. Although the lower course fees make access to education more affordable for financially disadvantaged seniors, OASIS membership profile surveys from 2009 and 2011 showed a similar member structure to the Osher Lifelong Learning Institutes.

2 Cf. URL: http://olli.berkeley.edu

The typical OASIS participant is 72 years old, mostly white, female, in partnership living, and higher educated than average (ibid.).

Also the participant structure of the Elderhostels[3] can be characterized in that way. These institutions were founded in 1975 at five colleges and universities in New Hampshire inspired by the Youth-Hostel-movement and offer a large variety of educational trips and excursions for seniors. After a name change to Road Scholar in 2010, the program was opened to people of all ages. Today, more than 100,000 participants per year of approximately 50 states of the U.S. and Canada participate in more than 8000 courses, educational travels and short seminars. Since its founding, Road Scholar had more than 5 million participants (cf. Road Scholar 2011, 2), which can be described as curious, tough, hale, healthy, and active until the oldest age (cf. Elderhostel Inc. 2007, 4). A high educational background and income level of the participants can be assumed due to a higher intellectual level of the classes and higher tuition fees.

In the same year as the Elderhostels, the Shepherd's Centers of America (SCA) were founded in Kansas City, Missouri, as a network of various local and volunteer-led senior institutions, which offer in collaboration educational, social, and community opportunities for older adults. The network is mainly located in Missouri and on the East coast. It is funded by private donations, participation fees as well as by community and foundation funds.[4] In addition to services such as meals on wheels, shopping and visiting services, seniors of all educational backgrounds can choose from a broad variety of workshops and courses.

Other institutions offering education for older adults are the local senior centers, which usually cooperate with other educational providers, like adult schools. The offerings vary among the centers. Although the intellectual level of the courses is lower than in the institutions discussed before, the centers try to cover a wide range of subjects. The teachers are either volunteers or staff from the cooperation institutions. Due to the lower course level and mostly free offerings, the membership mainly consists of financially and educationally disadvantaged seniors. Even homeless elderly are among the participants.[5] Nevertheless, depending on the catchment district as well as on the city and state, significant differences between the participant structures are existing, which makes a generalization of the typical participant difficult.

2.3 Age-heterogeneous institutions

Like in Germany, many universities offer older adults the opportunity to audit regular lectures. The access mostly depends on the willingness of the professors and lecturers to accept elders in their courses. Depending on the university the prices per semester vary.

3 Cf. URL: www.roadscholar.org

4 Cf. URL: www.shepherdcenters.org

5 E.g., URL: www.ci.berkeley.ca.us/ContentDisplay.aspx?id=4140

For instance, older adults can audit summer lectures for $50 at the public University of California at Berkeley,[6] while guest students over 65 years pay $700 per course in the Lifelong Learners Program[7] of the private Columbia University, New York. The Columbia program was established in 1986 and has currently about 200 members.

Another big area of age-heterogeneous institutions is the university extension programs, which were founded in the late 19th century and are connected to the local universities. Due to the fact that most of these institutions offer mainly job-related courses, which are in principle open to all ages, the membership is generally dominated by younger, mostly higher educated adults in better job positions. However, also some seniors participate in the seminars. UC Berkeley Extension as one of the largest institutions in the United States founded the Center for Learning in Retirement (CLIR) in San Francisco in 1973 to specifically address older adults, which now operates on an independent basis. Generally participation fees for the university extension programs depend on the institution, but they can be consistently described as rather high. However, it is noteworthy that the lecturers are exclusively experts and local professors.

Similar to the extension programs are the community colleges,[8] which were established about 100 years ago under the name „junior college". Nowadays about 1,200 of these either private or public institutions are existing in the U.S. The colleges primarily focus on vocational courses and two year trainings that help to get access to the three or four year university programs or the job market. Nevertheless, also general educational courses can be found in the broad curriculum. The community colleges mostly address young people at the beginning of their mid-20s, but also senior citizens are among the participants. In addition, some community colleges like the City College of San Francisco (CCSF), offer specific programs for the elder population, which are with about $120 per course far less expensive than the regular tuition. Furthermore, seniors have the opportunity to take part in certified trainings or online courses.

On the community level, one of the most frequented adult or senior educational institution of the United States are the adult schools, which have their origin in the mid-19th century and similarities with the German *Volkshochschulen*. Adults of all ages and levels of education can choose from courses that focus primarily on languages, computer and multimedia, health and sports, as well as arts and culture. Depending on the particular adult school, also vocational courses and high school diplomas are being offered. Currently more than 400 adult schools exist in California. In addition to their regular courses, around 300 of them offer also a comprehensive education program for adults 55+. As result of the previously mentioned financial crisis in the U.S., many schools were forced to cut their programs and to start charging fees for their formerly free seminars. In particular, the senior education sector was strongly

6 Cf. URL: http://summer.berkeley.edu/student-types/other-types-students

7 Cf. URL: http://ce.columbia.edu/Auditing-Program-and-Lifelong-Learners/Lifelong-Learners-Program

8 Community colleges are also called „City colleges".

affected by these cuts. However, a wide range of educational seminars and courses can be still found in the elderly program. Among the offerings are also special courses for physically disabled adults and frail seniors that take place in cooperation with local senior centers, retirement and nursing homes. Adult Schools also attract educational and financially disadvantaged seniors due to low tuition fees for their senior programs. Nevertheless, depending on the cooperation institution and the catchment district, big differences between the participants can be identified.

Other public institutions are the local libraries, museums, and churches. A generalization of the offerings seems to be difficult, as most of these mainly free offers vary greatly from one institution to another. However, the variety of programs appears to be very large and appropriate for each level of education. It can be assumed that the clientele, especially for the library and museum offerings, can be characterized as coming from highly educated backgrounds. Some libraries offer immobile people of all ages the possibility of a book-delivery service where the drivers are mostly voluntary seniors.

2.5 Geographic distribution of senior education institutions in the U.S.

The analysis of the senior population share in the U.S. (see Fig. 1) shows that the Midwest, Florida, New England and partly the Rocky Mountain and mid-Atlantic states have the largest proportion of older people (>12%). The Pacific states, Alaska and much of the southwestern and southern states are characterized by a lower elderly population. However, these parts of the U.S. experienced the strongest growth (>20% or more) of older people in the population between 2000 and 2010 (cf. Frey 2006, 19). The reasons for this effect are strong immigration into the relevant states in recent decades and the related aging of the immigrants. However, an interesting contrast exist as statistics show that immigrants very often have a lower income and educational level while at the same time the faster aging states show a higher income and educational level averaged over the whole population (ibid., 19f.). This discrepancy between these different parts of the population is a challenge for society, politics and education. The higher level of education on the East and West

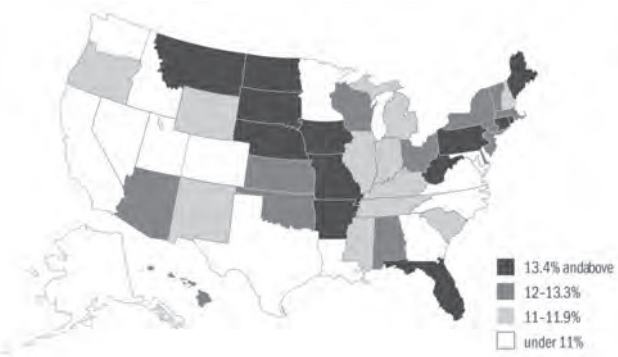

Figure 1: Share of the population age 65+ in the U.S., 2005 (Source: William H. Frey 2006)

coasts is also reflected by a greater accumulation of educational institutions for older adults such as the Osher Lifelong Learning Institutes, OASIS, and the Shepherd's Centers. The states between the coasts, except of Texas and Arizona, appear to have only a few relevant offers. However, in every state auditing programs at colleges and universities can be identified. In addition, it can be assumed that particular in rural and often very religiously shaped areas, education for older adults is often organized by senior centers and religious institutions.

3 Current discussion topics and projects

Certain trends in current projects, studies and publications can be identified in formal educational offerings for seniors. The following discusses selected projects and topics.

3.1 Research project „Reinvesting in the Third Age: Older Adults and Education"

A recent research project in the field of education for older adults is titled „Reinvesting in the Third Age: Older Adults and Education" and was carried out by the American Council on Education between 2007 and 2008. This study researched the current status of lifelong learning in the U.S. as well as the educational needs and the participation level in higher education of older adults between 55 and 79 years. Some of the key results are (cf. American Council on Education 2007, 3):

- the group under study showed a broad heterogeneity in terms of their learning needs and learning motivations;
- the biggest barriers inhibiting the participation in formal learning in age are transportation, time and financial issues;
- most older learners understand education as an opportunity to give more meaning to their lives;
- most older learners have a strong need for community in the learning process.

These results are consistent with both own observations and results of the 2012 internal member survey at the UC Berkeley's Osher Lifelong Learning Institute. Although OLLI@Berkeley offers already a wide range of community-enhancing activities, such as lunch events peer-led interest groups, there is still a strong demand for more activities of this kind.

3.2 Volunteering of the older generation

Engagement of older adults in voluntary work is currently a highly discussed topic in the U.S. and the volunteers seem to receive a great social prestige. Between 2003 and 2010 the number of elder volunteers 65+ has increased from 8.1 million to 9.2 million, accounting for 23.6 percent of all U.S. seniors. They worked US-wide about

1.7 billion hours on an unpaid volunteer basis in 2010.[9] Possible reasons for the increased number of volunteers are, e.g., better incomes and higher education levels. This is supported by Wilson (2000) as he states the number of seniors age 65+ without a high school degree decreased since 1974 by 40 percent and that more seniors with college degree are volunteering than ever before.

Older volunteers are active in many areas, but mostly in churches (46.2%), social institutions (17.5%), hospitals (10.1%), and educational institutions (8.0%).[10] One already mentioned example are volunteers at the Osher Lifelong Learning Institutes who can participate as volunteer faculty or as part of the curriculum committee to have significant influence on the educational content. This offers on the one hand the opportunity for the volunteers to be occupationally active after retirement, to network, and to develop new interests while on the other hand the society can make use of their knowledge and their potential. In addition, studies show a connection between good health and volunteer engagement as well as a connection between educational attendance and volunteer work.[11]

3.3 Brain fitness

Although today's age is marked by better health and higher activity level than previous generations, the chance of developing mental and physical illnesses is increasing with age. For instance, multi-morbidity can be mentioned as a sign of old age, which is characterized by both simultaneous occurrence of severe and often irreversible or chronic diseases (cf. Borchelt et al. 1996, 451) and the increasing risk of care dependency. In addition to chronic diseases such as Diabetes mellitus, hypertension, heart diseases, chronic cardiovascular illnesses, and pneumonia, dementia has one of the highest risks of illness in old age. Dementia causes disorders in remembrance, perception and cogitation. Most of these limitations are so severe that relatives cannot provide the care taking without external help or even a placement in a nursing home (cf. BMFSFJ 2002, 172ff.). Across the U.S. about 5.4 million people are currently suffering from dementia, which mostly affects older adults as 45 percent of seniors over 85 years show symptoms of this disease. Due to the demographic change, further growth of persons suffering from dementia is expected (see Alzheimer's Association 2012, 14f.). According to Borchelt et al. (1996, 453) in particular care recipients, visually impaired and multi-morbid older adults have an increased risk for this illness. Furthermore, the Berlin Age Study (BASE) could prove a correlation between dementia and educational background. They showed that graduates with only very basic school education had a 2.7 times higher risk for this disease than graduates with higher levels of education (cf. Helmchen et al. 1996, 186/204). Although dementia is not

9 Cf. URL: www.volunteeringinamerica.gov/special/Older-Adults-%28age-65-and-over%29

10 Ibid.

11 Cf. URL: www.aoa.gov/AoAroot/Press_Room/Social_Media/Widget/Statistical_Profile/2011/3.aspx

curable, it was shown that, e.g., continuous learning and training of the brain can be considered as preventive action. Also the American senior education is responding to this correlation between healthy aging and lifelong learning, which becomes apparent by a variety of relevant seminars and workshops. For example, the Center on Aging at the Anne Arundel Community College[12] offers various programs and lecture series on these topics, which are very popular among the participants.

3.4 Education in the fourth age (80+)

As already discussed, the demographic change results in an increasing number of seniors in the U.S. population, which means that also people of very old age (80+) will no longer be a rarity. To meet the learning needs of this target group, it is important to develop innovative and targeted offerings. Furthermore, it will be necessary to customize current educational practices to the specific living conditions of very old learners. An exemplary response to this request, are the „Fourth Age salons" of the UC Berkeley's Osher Lifelong Learning Institute. As was shown by an extensive literature study carried out by the institute in the summer of 2011, that scientific studies concerning the educational behavior of mature old adults 80+ are only marginal existing on national and international level. This study especially tried to find publications concerning applicability in the educational practice. No American publications and studies regarding this matter seem to be existing, but numerous publications covering very old age in relationship to diseases, care dependency or mortality. This might also be a good description of how very old people are perceived in public. Based on these findings, OLLI@Berkeley developed in October 2011 the concept of so-called „Fourth Age Salons", which should help taking a closer look at their own members over 80 years and therefore shed some light on the educational behavior at very old age. Currently, about 10-15 participants between 80 and 90 years are taking part in the salon. Interestingly about 60 percent of these are males and 40 percent are women. Noteworthy is the extremely high level of education in this group, as most participants are retired professors and doctors. The salons offer participants the opportunity to share experiences and resources while a key motivation is to directly improve the educational opportunities for people of advanced old age. It became obvious that for most of the participants hearing loss is one of the biggest challenges and therefore a major barrier to formal education settings. This is supported by findings of the National Institute on Deafness and Other Communication Disorders (NIDCD), which showed that 36 million of the U.S. adults (17%) suffer from hearing loss and that there is a strong correlation with age as the percentage of adults with hearing limitations increase from 30% for the 65–74 year old bracket to 47% for 75+. Therefore, equipping educational institutions with modern assistive hearing devices can play an important role to reduce barriers for participation in education in higher age.

12 Cf. URL: www.aacc.edu

4 Selected studies on the assessment of adult competencies in the U.S.

In addition to new target groups, e.g., mature older learners 80+, older adult education needs to prepare itself to increasing education and competence levels, which will result in higher demands for formal educational courses. Therefore, it is a necessity to research everyday life competencies of adults to develop efficient adult education policies and recommendations for action. Variables that need to be internationally compared are changes of competency levels over times as a function of age, gender, and educational level.

Therefore, two selected studies on the international assessment of adult skills will be presented in the following. First, the International Assessment of Adult Competencies (PIAAC), which is currently in process, and the second one is the Adult Literacy and Life Skills Survey (ALL) building the basis for PIAAC.

4.1 Program for the International Assessment of Adult Competencies (PIAAC) in the U.S.

The Program for the International Assessment of Adult Competencies (PIAAC)[13] is a project of the Organization for Economic Cooperation and Development (OECD),[14] which aims to compare competencies of adults between the age of 16 and 65 years in the fields of literacy, numeracy, and problem-solving in technology-rich environments internationally. Besides the U.S. and Germany, 24 other industrialized countries are participating in this study. All participating countries are following the same quality standards during the conducting of the study that were set by the OECD consortium. In addition, a fixed standard in terms of study design, data collection and reporting is followed.

By analyzing the data, conclusions on the current level of competencies of the relevant population can be obtained, as well as possible differences between gender, age groups, and social classes. One of the main goals is to develop action recommendations for education policies. PIAAC builds on the experiences from previous adult competence assessments, such as the International Adult Literacy Survey (IALS) and the Adult Literacy and Life Skills Survey (ALL), and improved their assessment methods.

In the U.S., Canada, and Great Britain, the Program for the International Assessment of Adult Competencies (PIAAC) is carried out under the name International Survey of Adult Skills (ISAS).[15] However, the term PIAAC will be used in the following. PIAAC consists in all participating countries out of an extensive background questionnaire (in

13 Cf. URL: www.bmbf.de/de/13815.php; http://nces.ed.gov/surveys/piaac

14 Cf. URL: www.oecd.org

15 Cf. URL: http://nces.ed.gov/surveys/isas/index.asp

the U.S. available in English and Spanish) and out of interviews that typically last two hours. Hereby, the competence assessment component evaluates literacy, numeracy, and problem-solving skills in the context of new technologies.

About 10,000 households were contacted in the U.S. to ensure that PIAAC United States could achieve the goal of 5000 usable questionnaires. An overall response rate of 65%, which is 3% lower than the response rate from the ALL study, and a usability rate of 85.8% were expected (cf. National Center for Education Statistics 2010, 24). The data collection was completed by April 2012 and the preliminary response rate was after completion 70% and therefore 5% higher than the expectation.[16] The plan for PIAAC United States foresees to receive the international results in April 2013 and to write the final study report until the end of 2013 (cf. ibid., 27f.).

4.2 Adult Literacy and Lifeskills Survey (ALL) in the U.S.

The Adult Literacy and Life Skills Survey (ALL)[17] is an international comparative study on adult competencies which can be seen as the basis for the previously presented PIAAC assessment. The study was conducted in 2003 and the United States, Canada, Bermuda, Italy, Norway as well as Switzerland were participating. Similar to PIAAC, literacy and numeracy skills of adults 16 to 65 years old were evaluated as well as on pilot study level problem-solving competencies (cf. National Center for Education Statistics 2005, 1f.).

The study defined literacy as the necessary knowledge and abilities to understand and make use of information from different forms of texts and other written formats. Numeracy is the knowledge and skills required to manage mathematical demands of diverse situations (ibid., 1).

In general, the study had two components:

- a background questionnaire with gathered general information of the participants such as age and gender, but also on educational level, reading practice in everyday life, and participation in formal education,
- a written assessment of the literacy and numeracy skills of the participants.

In the United States 3420 adults between 16 and 65 years were evaluated in the study. The data collection took place between January and June 2003. Thematically ALL builds upon earlier studies of adult literacy, including the International Adult Literacy Survey (IALS), which was carried out in 1994, 1996 and 1998 in 20 countries, including the United States (e.g., Kirsch 2001). A key result of the international comparison was that the United States finished in the second to last when comparing the mean values of all participants. Furthermore, within the U.S. sample a large difference between the best and the worst 10 percent became obvious, and whites on average scored higher

16 According to own statements of the National Center for Education Statistics.

17 Cf. URL: http://nces.ed.gov/surveys/all

than Hispanics and blacks. However, no significant differences between genders were noticeable (cf. National Center for Education Statistics 2005, 1f.).

5 Conclusion and outlook

The demographic change in the U.S. leads to a growing number of old and very old people in the society. Like in Germany, the United States would be one of the countries with high average age and shrinking population, if the effect of immigration especially from Latin America would be not as prominent. This structural change causes new challenges for politics, society, and education as it needs to deal with a growing older population that is at the same time culturally very diverse. Societies with a comparable number of seniors and young people most likely have to integrate the older generation as vital and productive part to keep up the standard of living. Therefore, lifelong learning will get an important function. Unfortunately, the political climate for education in times of recession is difficult and massive cut backs of public funding are currently noticeable. Therefore, most of the discussed institutions are funded directly by participation fees, donations or endowments.

In general, the US-American older adult education can be characterized by a high level of creativity, innovation, willingness, and strong member involvement. Although it currently receives only little scientific interest, it seems to enjoy a great public value, which becomes obvious by a large number of offerings. A higher accumulation of senior educational opportunities can be found in states with wealthier and better educated seniors on the West and East coasts, which typically reside in the suburban areas of cities. Therefore, the expansion to more rural areas of non-coastal states needs to be considered for a better homogenous coverage. Interestingly the states with more educational offerings also show a large diversity of cultural groups with different educational levels. These states have seen strong immigration in the last decades and now have to face a growing number of seniors with low educational levels. Considering the typical formal older education participant who can be described as female, white, and higher educated, it becomes directly evident that action for the integration of underrepresented groups is required. Therefore, educational programs must be able to serve completely different clienteles. The challenge is both to provide educational offerings on a high intellectual level on one hand, and on the other hand to interest educationally disadvantaged groups for offerings to equalize the overall educational level. In addition, there are other age-related barriers of participation in education for seniors. Typical impairments are reduced mobility as well as decreasing sight and hearing abilities. Especially hearing loss is difficult to compensate. Targeted training of staff and adequate equipment of venues can help to reduce these barriers and increase the attractiveness of the offerings. Increasing frailty with age is causing immobility and is one of the biggest problems for providing education in a classroom setting. Although the direct social interaction component is smaller, it seems obvious

that the possibilities of the Internet to reduce these barriers needs to be further explored.

Compared to Germany, American seniors already have a rather high computer literacy level, which will further increase in the next decades, when computer-savvy generations enter the age group 65+. At present, more than half of all U.S. elders 65+ have access to the Internet, 70 percent on a daily basis (cf. Zickuhr/Madden 2012, 2). Since seniors represent the most diverse population, Internet/ computer-based offerings can be an attractive and cost effective solution for many of the problems described. This way a homogeneous geographic coverage could be reached, individual strengths and weaknesses could be addressed and therefore barriers systematically reduced. A good understanding of the competence level of the individual learner is crucial to achieve this effect.

One of the largest completed assessment of adult competencies is the internationally conducted ALL study from 2003. The international comparison showed that the average competence level of the U.S. participants in all examined fields were rather low. A possible explanation might be the influence of different skill levels of different population groups. The PIAAC study researches the current status of competencies, but emphasizes the understanding of problem solving competencies in technology-rich environments for a more complete picture of the everyday-life skills of adults. The goal is again to compare the competencies of adults internationally and to use the results for the development of action recommendations for educational politics. Based on the results affirmative, actions especially for educationally disadvantaged population groups as well as the initiation of targeted education programs become possible. Moreover, the evaluation of competence levels of the different age groups is important for future senior education planning. However, the PIAAC sample is limited to adults between 16 and 65 years. Keeping future demographic developments in mind, e.g., an extension of the study sample up to 80 years is encouraged, following the example of the German PIAAC companion study Competencies in later life (CILL). In addition, an implementation of PIAAC on a regular basis would make sense for a better understanding of the development of adult competencies over time.

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