LOWER EDUCATED ADULTS LEARN BASIC SKILLS ONLINE

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Abstract
Using adapted digital exercise material, lower educated adults can work at their own development and towards better participation in society in an informal and non-formal manner. Learners can participate in and be successful in online environments at various levels. Lower educated adults are doing this, independently or with support, through self-motivation and because they want to be at the helm of their own learning process. Digital skills are a precondition for this: they are the new key skills, as opposed to for instance traditional language skills. They provide a springboard to other domains – in addition to literacy and numeracy – such as health, work, parenting and money, which are increasingly digitalised. Digital information channels often put too much focus on language without regard to the users. Digital communication skills are increasingly required, even for lower educated adults. This Dutch contribution shows how important it is for lower educated adults to practise and increase their digital skills on a basic level of literacy, enabling them to perform adequately in digital communication and to operate skilfully in the digital world. This is illustrated using the exercise portal *Oefenen.nl* (Practise.nl) and the *Klik & Tik* (Click & Tick) programs that were developed specifically for adults with a low level of education. This offers chances and opportunities for a new style of adult education.

Keywords: online/digital learning, digital skills, literacy, non-formal learning, adult education, PIAAC

1. Introduction

Digitization is advancing in all areas of society and not least in that of the government. In the Netherlands, the government wants all government communication to be digital in 2017. However, there is a large group of people for whom it is a bridge too far. They are not digitally proficient enough and lack other basic skills, for instance language and numeracy, to participate fully. For these adults with a low level of education there should be support. And that can

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be done with the use of adapted digital learning materials which they can use themselves on their own or with some sort of support to improve their basic skills. In the Netherlands this can be done with, for instance, the portal *Oefenen.nl* (Practise.nl) with a lot of programs around the Dutch language, numeracy and digital skills, but also embedded in relevant themes (for instance health and work). For example, the *Klik & Tik* (Click & Tick) programs help people to become more digitally skilled. This contribution shows how important online learning is for lower educated adults to improve their basic skills, such as their digital skills. It is important that this is done at their own level of language proficiency.

2. Digital skills to participate in society

In the 'Vision letter e-government' the Dutch Government sets forth its commitment to e-government, whereby citizens will have to communicate with the government safely and easily online by 2017. Paper letters and forms will disappear. What does this mean for the large group of Dutch people who have not enough digital skills?

From 2017 onwards the government intends to communicate with its citizens almost exclusively through the Internet. Customer contact with organisations such as Employee Insurance Agency, the Social Security Bank and the Tax Authority has increasingly become digitalized. The Chamber of Commerce too, is digitalized; everything is done via computer. Yet there are about a million people in The Netherlands who lack sufficient language and computer skills for this. Bommeljé and Keur (2013) convincingly argue that the government grossly overestimates the digital skills of Dutch citizens (see also Klute & Vaske 2013). In their digital participation ladder they clearly show that language is a precondition for digital skills. Time and again, lower educated adults fall through the cracks of government policy. Slogans such as 'own strength', 'self-sufficiency', 'responsibility' and 'active citizenship' sound good, but some sort of support remains necessary. Support for instance can refer to places of access (such as libraries), accessibility (navigation and layout), human support (such as volunteers or help at the workplace) and language or specific materials (functional, aimed at the everyday experience of adults).

The Netherlands was one of the countries participating in the International Programme for the International Assessment of Adult Competences (PIAAC), the results of which were published at the end of 2013. This study charts the level and use of skills among people aged 16 to 65. PIAAC tests language and literacy skills, numeracy skills and problem solving ability in digital

environments. This concerns functional skills: understanding and applying information found in everyday life.

The problem solving ability in a digital environment is closely associated with computer skills – the ability to use information and communication technology (ICT) applications – and with the cognitive skills that are required to solve problems. This skill does not merely concern testing computer ability, but involves testing the adults' ability to use these digital tools to find, process, evaluate and analyse information effectively.

Solving problems in a digital environment is seen as an important skill for many different professions. Most people already deal with computers in both their daily and working life. The results (Buisman et al. 2013; Houtkoop 2014; see also OECD 2015) show the following:

The Netherlands has a high level of digitization: 97% of the people in The Netherlands have experience with computers in their daily life, 91% use a computer from time to time, 80% have experience with computers in their working life and 94% of the people who use computers at work have the required ICT experience; A small percentage (3%) does not have computer experience (level 1 of PIAAC).

Although many low-literates cannot be regarded as digitally illiterate, there are some differences with the higher educated participant: 87% of people with low literacy use a computer from time to time, but they use the computer with less intensity than people with a higher level of skills; they are almost nearly as active as people with a high literacy level when it comes to e-mail and searching for information online, but they use less often Word and Excel.

Van Dijk & Van Deursen (2014) describe the following six types of internet skills (from lower to higher order skills):

***Medium-related internet skills**:*

Operational skills: the technical competences required to command a computer or the Internet. Also called: 'button knowledge'.

Formal skills: browsing and navigating the Internet.

Information skills: the ability to search, select, and evaluate information in digital media.

Content-related internet skills:

Communication skills: the use of email, chatting, instant messaging or tweeting, preparing profiles on social media or online dating, and contributing to online communities requires special communication skills.

Content creation skills: professional skills for not only the design and publication of a personal or professional website; it also refers to the writing of text, the

recording or assembling of pictures, videos, and audio programs, or compiling a personal profile and producing messages and images on a social networking site. *Strategic skills*: refers to the ability to use the digital medium as a means for a particular or professional goal. For example comparing prices in ecommerce or making a reservation for the cheapest and most convenient flight.

2.1. Literacy and digital skills

There is a relationship between literacy level and Internet use (Baay et. al 2015; Van Deursen & Van Dijk 2012). People, who are digitally illiterate, are more likely to have a low literacy level. Formal, information and strategic skills are also lower when people have a lower literacy level. This means that having difficulty to read and write has a negative impact on their ability to navigate and search the Internet. A later study by Van Deursen and Van Dijk (2014) shows that in The Netherlands there is a relationship between literacy and formal and information skills and that literacy is a precondition for the use of Internet skills. No relationship was found for operational skills. They rightly comment that in order to participate in this type of study people need to have a fairly high level of literacy. People with really serious literacy problems most likely will also have problems with operational skills.

At the request of the Ministry of the Interior Affairs and Kingdom Relations, Gillebaard and Vankan (2013) carried out a study into the digital skills of Dutch citizens in view of the government aim for a (full) e-government by 2017. They rightly claim that much educational material aimed at giving people better digital skills often requires a basic level of literacy. They describe who are threatened to be left behind. This includes people with low literacy.

People with a low level of literacy are not necessarily digitally illiterate. However, much digital information puts too much focus on language (and literacy) for this group and sites are also often difficult to navigate. A big problem is to make digital content understandable for people with literacy problems. There is indeed a clear link between language and literacy skills and digital skills.

3. Online learning in adult education

The question is whether lower educated adults can be educated digitally. The use of ICT is often mentioned in connection to teaching people with insufficient literacy skills. There are enough practical examples and experiences (for instance *Learning together with digital technologies* 2012; Clark 2011; Davis & Fletcher 2010;

Driessen et al. 2011; Hegarty & Feeley 2010). Learning with the aid of ICT and multiple learning strategies seems to work because it helps build the self-confidence of participants and increases their motivation.

That learners on the lowest level can handle online material has already been shown by an American review study (National Institute for Literacy 2008) into the thresholds of 'literacy and language proficiency' that are necessary for adult learners to use the internet for 'independent learning'. It showed that there are no thresholds: 'Learners at even the lowest levels of literacy and language proficiency can engage with online learning content. Moreover, all reports indicate that they are eager to do so and benefit in important ways, such as self-confidence, learner autonomy and independence. Adult learners across the literacy and language spectrum show strong motivation to gain computer skills, perceived as key to work advancement.' The study also describes that other research had shown that a group of self-study learners showed more 'apparent interest' in the use of computers and the Internet with 'the lower literacy proficiency'. Adults with a low level of literacy seem to want more learning possibilities than those with 'high intermediate levels'.

In a review study MacLeod and Straw (2010) pointed to a number of examples whereby online learning was used to teach basic skills, and whereby these were 'embedded' into an ICT course. This was highly successful because learners were willing to identify their digital skills, whereas they were unwilling to admit they needed to improve their language and numeracy skills. Other courses showed that learners enjoyed learning English using online material.

There is enough evidence to prove that digital learning makes a difference. Digital learning gives a great stimulus to informal and non-formal learning. Non-formal learning is intentional and systematic, but is not bound to final attainment levels. Most adult learning falls under non-formal learning. Informal learning is never organised, non-intentional and has no set objective in terms of learning outcomes (Doets et al. 2008; OECD, no date). Digital learning has become a constant factor for adults with a low level of education in our society (Vaske & Schrijvers-van de Peppel 2013). It means a breakthrough for a large group of people and is a popular way for lower educated adults to acquire basic skills. Studies show that digital learning motivates people and is successful. Digital learning offers both chances and opportunities (Bersee 2014; Bersee & Vaske 2013).

3.1. Digital learning in The Netherlands: *Oefenen.nl* and *Klik & Tik*

The report of the results of five years of policy on low literacy from 2006-2011 (Steehouder & Tijssen 2011) states that in The Netherlands in the past few years

an important impulse has been given to the development of a digital learning environment for adults with a low level of literacy, using the multimedia programmes that were realised by Stichting Expertisecentrum ETV.nl (ETV.nl), and that have since been collected on the portal *Oefenen.nl* (Practise.nl) It also states that further development of digital learning and digital learning environments will offer many opportunities to approach lower educated adults and adults with low literacy levels (see also *Scaling Up, Achieving a breakthrough in adult learning with technology* 2012; Clark 2011; Hegarty and Feeley 2011; and Moriarty 2012). *Oefenen.nl* is the starting point for people who want to improve their basic skills interactively.

Oefenen.nl

During the past 10 years ETV.nl has been working on the use of multimedia for adults with a low level of education. The ETV.nl programs are specifically aimed at the wishes, requirements and backgrounds of lower educated adults and of people with insufficient proficiency in the Dutch language (L1 and L2) (Bohnenn et al. 2014; Van de Laar 2014).

As can be seen in Figure 1, the portal *Oefenen.nl* has links to programs for various domains. These domains are: Language, Maths, Work, Parenting, Money, Health and Internet.

Figure 1. *Homepage* Oefenen.nl

Figure 2 shows the page with the overview of language programs, both Dutch as first language (the *Lees en Schrijf!* [Read and Write] programs) and Dutch as a second language (the *Taalklas.nl* [Language class] programs]. People who want to start with language programs can do a small 'test' on *Oefenen.nl* via the button 'Kies je taalniveau' [Choose your language level]. The results determine whether you are better off starting a program with 1, 2, 3 or 4 stars.

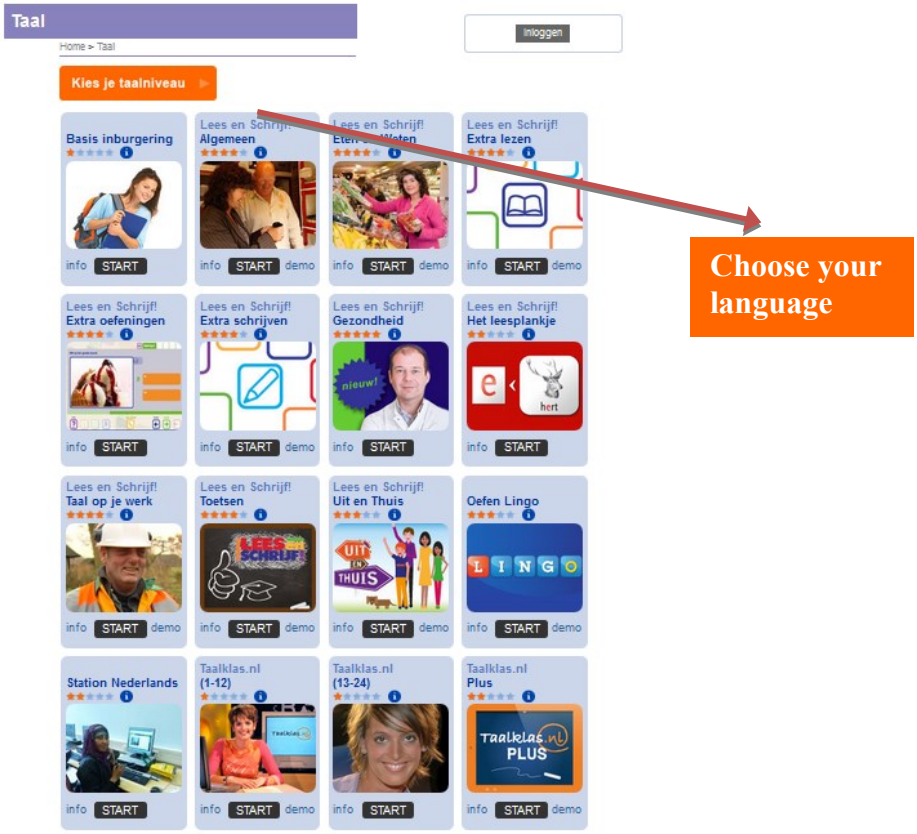

Figure 2: *Page from* Oefenen.nl *with language programmes*

ETV.nl offers its exercise materials through the portal *Oefenen.nl*. *Oefenen.nl* is a portal, specifically developed for lower-educated (young) adults who want to improve their basic skills with regard to language or literacy (for instance using the popular programs *Taalklas.nl* (Language class) or *Lees en Schrijf!* (Read and Write), numeracy and digital skills. These basic skills are embedded in subjects such as health, work, parenting and money (see Figure 1). Individual work at

home is free of charge. Organisations that want to work with *Oefenen.nl,* must buy a license. This licence not only provides access to the exercise material. it also gives access to the tracking system that supervisors/teachers can use to guide the learning process: by making learning routes for their learners, by following their progress and through direct contact.

The tracking system includes additional material such as working sheets for various programs and User/Teacher manuals. Workbooks also support these programs.

Oefenen.nl wants to be the medium through which people can develop themselves. Users can choose their own programs, depending on their needs. For instance for people without a job or for people for whom a course forms too great a step (be it out of shame or insecurity).

On the basis of *Oefenen.nl,* the A&O fund has developed the WERK-portal (work-portal) for organizations that employ people with disabilities. The online learning material they develop themselves has been added to *Oefenen.nl,* creating a rich exercise environment for the working field. In 2014 70 of these organizations used this WERK-portal and the number of users rose with 76% from 6,614 in 2013 to 11,668 in 2014. Cooperation between such organizations and libraries offers opportunities for support of large groups of adults with limited digital proficiency. One of the gains is that teachers, volunteers and work consultants say that employees who participate in education, take responsibility for their own development. This can be seen in the improved verbal communication on the workplace (IJpelaar 2013).

The language programs on *Oefenen.nl* have been designed for a specific target group: adult learners of Dutch as L1 and of Dutch as L2. In The Netherlands we have a specific framework for both groups, describing proficiency levels. The levels for L1 Dutch are drawn up in the Standards and references for adult education (see Table 1). The levels for L2 are drawn up in the *Raamwerk NT2* (Framework Dutch as a Second language). This is the Dutch version of the Common European Framework for References for Languages (Council of Europe 2001). See for a comparison of both frameworks CINOP (2013). See also Table 1.

Table 1: *Framework Dutch as L2 and standards and final attainment levels of adult education compared (ae)*

Framework Dutch as L2	Standards adult education
A1	Intake level
A2	1F
B1	2F

Figure 3 shows an example of an exercise on the level below A1 (L2). It is an exercise from the first chapter with the theme The House of the program *Taalklas.nl 1-12* (Language Class). The instruction (also in audio) is: Click on the ear, listen and read, repeat the words; in this case the word 'badkamer' (bathroom).

Figure 3: *Example of an exercise below level A1 for L2*

Figure 4: *Example of an exercise on level A1 for L2*

Figure 4 shows an example of an exercise on the level A1 (L2). This exercise comes from the chapter 'A letter from school' of the program *Taalklas.nl 13-24*. It is a writing exercise. The instruction (also in audio) is: Click on the right word and on the right place in the picture. For instance, the learner clicks in '20.15u' and then on the right place in the reply slip. Then the word appears in the picture.

An example of a reading exercise on the intake level for L1 is shown Figure 5. This is an exercise from the chapter 'Do odd jobs' of the program *Uit en Thuis* (Off and at Home). The instruction (also in audio) is: 'Read the question and Click on the right spot in the picture'. The learner has to click on the word 'muurverf' (wall paint).

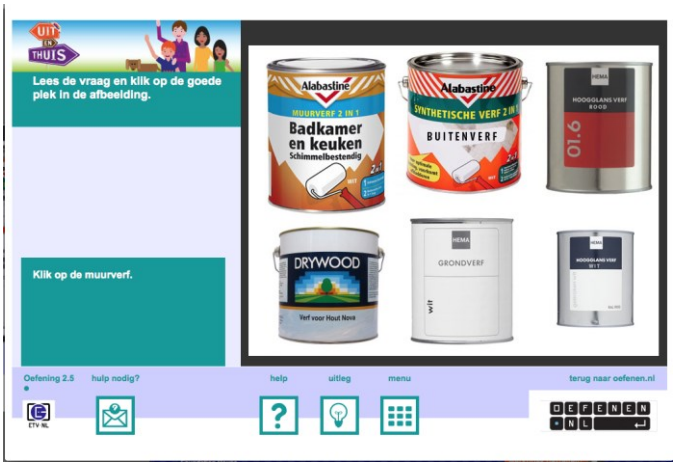

Figure 5: *Example of an exercise on Entry Level L1*

It is interesting to see that at *Oefenen.nl* the language programs are used mutually: L1 learners use Dutch L2 programs and vice versa. More L2 learners are actually using L1 programs than L1 learners. When we focus on the active users of mainly the *Lees en Schrijf!* programs we see that 64% learn Dutch as a second language. The focus of the *Lees en Schrijf!* programs is on Dutch as a first language (Smit and Camo 2013). For L2 learners around or just below level A2, the material on *Oefenen.nl* turns out to be very usable, provided they are given a little support.

Klik & Tik

ETV.nl has developed three *Klik & Tik (*Click & Tick*)* programs teaching digital skills to low-educated adults and people with insufficient language proficiency:

Klik & Tik. Het internet op (2009) (Go online), *Klik & Tik. Samen op 't web* (2010) (Together online) and *Klik & Tik. De basis* (2014) (The basis). These programs are on *Oefenen.nl.*

Klik & Tik. De basis teaches users in 21 chapters how to use the basic functions of the computer.

Klik & Tik. Het internet op teaches the user in six chapters how to use the basic functions of the internet.

Klik & Tik. Samen op 't web teaches the user in seven chapters how to use social media in a safe and controlled environment.

There is an introductory film in three parts, suitable for plenary use before the start of a course. There is a learners' book that links the three programs (Bohnenn et al. 2014), a manual for supervisors, and each program comes with a certificate. There are also three learning courses for license holders of *Oefenen.nl*. Each learning course is based on a *Klik & Tik* program and is supplemented with other relevant material from *Oefenen.nl*. Finally, there are the working sheets '*Allemaal Digitale Apparaten'* (Lots of Digital Machines) that introduce learners to other digital equipment. The programs take the language level of the target group specifically into account. Currently, this makes the programs unique.

Figure 6 gives an example of an exercise of chapter 8 of *Klik & Tik. De basis* with the title: Stop. The instruction is: Read the exercise. Click on the right spot in the picture. The exercise is: Finish the program. Click on the cross.

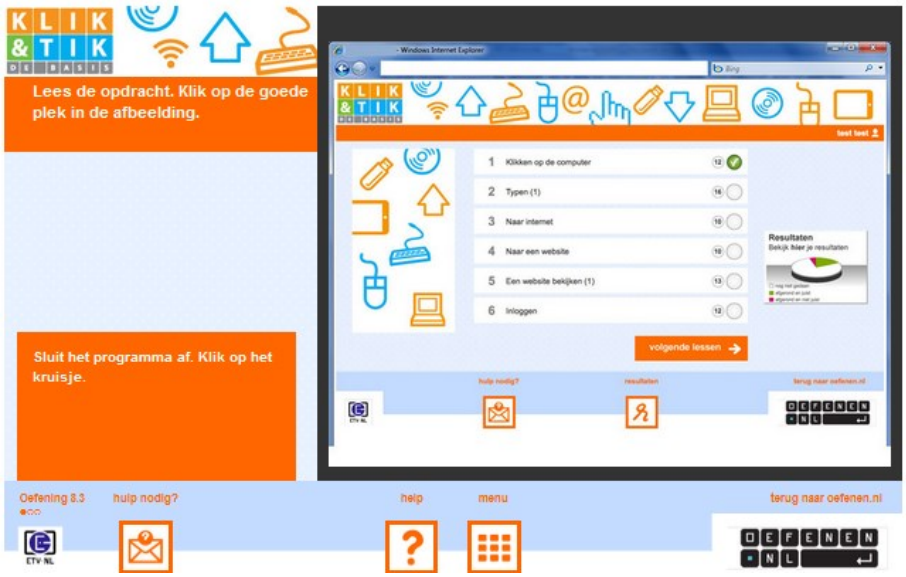

Figure 6: *Example exercise* Klik & Tik. De basis

For the first two *Klik & Tik* programs the division into the earlier mentioned Internet skills (Figure 1), which had at the time only recently been announced, were taken into account, with an emphasis on operational and formal skills. The third program has been developed in accordance with the Standards and References for language proficiency, numeracy and digital skills for adult education (see Table 1), and the two other programs were also weighed against this. This ensures that the three programs now cover a large part of the levels for digital skills. Prior to 2013 there were no formally-set standards for adult education in the Netherlands. This omission has been rectified. Since 1 January 2013 there have been legal standards and references for language proficiency, numeracy and digital skills. It means that both formal and non-formal education courses in receipt of state funding must meet these standards. A clear link has been established between language skills and digital skills. The levels for digital skills are linked to the levels for language proficiency and numeracy.

The final attainment levels for digital skills have been formulated within the context of literacy and use of everyday technology. The digital skills have been grouped into five domains:

- Domain 1: Use of ICT systems
- Domain 2: Security, privacy and ergonomics
- Domain 3: Searching for information
- Domain 4: Processing and presenting information
- Domain 5: Communication.

For Dutch as a second language the Framework Dutch L2 is being used.

3.2. Uses and results

To give an impression of usage, Table 2 sets out the numbers of new Oefenen.nl accounts between 2012 and 2014.

Table 2: *New accounts of* Oefenen.nl

	2012	2013	2014
New accounts	127.000	131.693	164.000

In 2014 the number of *completed programs* on *Oefenen.nl* rose with 23% from 4,931 in 2013 to 6,100 in 2014. The number of free, *individual accounts* (free use at home) rose in 2013 with 7% from 1,361,461 in 2012 to 1,458,833 in 2013. The increase in

free usage in 2014 versus 2013 is 39%. In 2013 the number of *licensed accounts* (through an organisation or with another form of supervision) rose with 30% from 117,298 in 2012 to 151.619. The increase in 2014 versus 2013 is 46%. The *number of visits* by these users through a license rose in 2013 with 147% from 126,314 in 2012 to 312.027. In 2014 we have seen another increase: 30%. The *Klik & Tik* programs are very popular and are used in various settings, such as welfare organisations, in mainstream education, in reading and writing classes, classes for senior citizens and mainly in libraries.

Gillebaard et al. (2013) indicate that even non-formal education, such as courses using the e-learning program *Klik & Tik* in libraries, means that digitally illiterate people show improvements in various aspects. This is supported nationwide by the library organisation. All Dutch libraries have a license for *Oefenen.nl* and research was and still currently is being carried out into the use and effect of the programs in libraries (Smit 2012; Smit and Camo 2013, 2014; Smit and Van de Ven 2012). As a library employee puts it (21 February 2015):

> "We were very surprised that there is still such a large group of (older) people without a computer and/or computer experience. Whenever we plan a series of workshops, twice as many people apply than we have space for. For 2015 we have already 5 courses set up. Our participants of Klik & Tik de Basis are very enthusiastic and almost all of them go on to do the course: Het internet op."

Libraries are generally positive about offering educational services surrounding *Klik & Tik.* The materials appeal to the participants, they are accessible and the libraries generally manage to support the participants in practising with the materials. Library employees are also positive about the results with the end users. They notice less fear of computers, more self-confidence and in various levels more proficiency among the participants of the educational part of the materials. *Klik & Tik* dovetails well with the national policy regarding media knowledge and low literacy, and lifelong learning, and it fits in with the needs of groups that are left behind. The programs also fit in well with the day-to-day experience of the library because the *Klik & Tik* programs are more or less ready-made exercise packages. Libraries can use the material immediately without having to do much work of their own. This fits in well with the limited capacity libraries have to develop their own educational products. A large number of learners indicate that because of *Klik & Tik* they now use the library for other purposes as well. The demand for more *Klik & Tik* programs, including thematic ones, remains undiminished, conform a spoken column by Halima Makoul, coordinator with Al Amal in Utrecht, 5 March 2014

(https://d1l066c6yi5btx.cloudfront.net/etv/docs/71e6d251-cd7a-4728-86ba-50f508336597.pdf.). (See also Klute & Vaske 2013.)

> ''That is why I am so happy about *Oefenen.nl* and the new basic module of *Klik & Tik. Klik & Tik. De basis* offers (young) adults, but also older people, an attractive and accessible way to practise a number of digital applications and thereby offer a gateway to digital skills that are needed to communicate with public bodies such as: UWV, debt assistance, youth care and the Child Welfare Council. The online programs of *Oefenen.nl* may be used anywhere, in community centres, libraries, but also at home."

In a study that showed the results of learning courses in non-formal contexts the effects of the digital exercise environment *Oefenen.nl* of ETV.nl were also looked at (De Greef et al. 2012). Half of the respondents were in paid employment; most participants used the programs *Lees & Schrijf!* (for Dutch L1 learners) and *Klik & Tik* (Click & Tick), and they spent on average three hours per week or fewer on education through the digital learning environment *Oefenen.nl*. The majority of the participants thought the exercise material of good quality. They decide when and how they learn (self-guidance) (see De Greef & Bohnenn 2011; Fuhri Snethlage & De Groot 2014). *Benefits of Lifelong Learning* 2014; Sgier 2014) and they indicate that they can apply what they have learned in daily life (transfer possibilities). Earlier research (Neuvel 2007; Smit & Bersee 2009) showed that the use of a digital exercise environment has a positive effect on the reading and writing capability of participants. De Greef et al. (2012) confirmed this. This study showed that the use of a digital environment ensures a better place in society for a relatively large number of low-skilled participants; is mainly successful when there are sufficient transfer possibilities and when (for several adults) constructive support by a teacher is offered; and interactive and practice-based learning materials and activities are offered and can be offered effectively.

4. Towards a new style of adult education

Adult education in The Netherlands has been in a difficult position for a number of years now. The Dutch L2 education has already been commercialised. From 2015 the education budget will be handed to the local authorities and they will no longer be obliged to contract out to the Dutch centres for vocational educational training/adult education. This fits in with the decentralisation of responsibilities towards the local authorities.

It is coupled with shrinking budgets (from 340 million in 2003 to 53 million in 2013) and corresponding diminishing numbers of students in formal education.

Once the state no longer feels responsible, the budgets shrink and so too does the number of participants. Concerns about quality and continuity are valid. Large investments would be necessary to make education stronger, both with regard to quality and the type of courses on offer, but those means are not available, nor will they be (Van Schoonhoven 2012). But more money doesn't always lead to better education (De Bruyckere et al 2015).

But it can be done cheaper and smarter with proper use of digital learning resources and more attention to non-formal learning in other types of arrangements (Bersee & Vaske 2013).

Formal adult education is under pressure. So there is a shift towards non-formal education using digital materials.

Not everyone on *Oefenen.nl* is an active learner. A very large group of potential learners of basic skills is being reached. But enormous gains can still be made concerning the extent to which these potential learners are actually practising with the learning materials on offer.

The materials may be used in a variety of settings: at home, in the library, at school, in the community centre, open learning centre and at work. Different types of supervisors may use the materials: partner, children, language buddy, student, teaching assistant, library employee, teacher, online helpdesk etc. The materials may be used by a wide spectrum of social sectors and organisations. The online materials facilitate 'blended learning' (Smit & Bersee 2011).

The scale on which the materials are used demonstrates the great need for support of basic skills using online materials. Realising multimedia learning materials is the first step, but at the end they must be introduced to the target group. Cooperation with community organizations must take place as close to the target group as possible and on a small-scale. Local authorities can certainly play a decisive role. For instance the municipalities of Amsterdam (*Educatie werkt!* 2012; Fuhri Snethlage & De Groot 2014), The Hague and Utrecht facilitate non-profit and educational organisations in using online learning basic materials to improve basic skills for learners. These local governments buy licenses for *Oefenen.nl* for these organisations and also are helping to facilitate these organisations in using these. Such as for instance a large residents association that provides large-scale computer training with volunteers using the *Klik & Tik* programs.

Digital proficiency, like language proficiency and numeracy is one of the three core skills you need to participate in society. Digital proficiency has become a key to learn language and numeracy. And digital skills provide a springboard to other domains such as health, work, parenting and money. On a portal such as *Oefenen.nl,* adults can work on these skills digitally. This digital

self-service, outside formal education frameworks, offers many opportunities for people to further develop themselves.

The use of social media has much potential (Chovanec & Meckelborg 2011; Smythe & Fraser 2012). Lower educated adults people are often already active on mobile platforms and social media. They use Facebook, Skype and WhatsApp, they use text and play games. However, there is not yet a link to educational use and needs.

Learners may participate and be successful in online environments at various levels. Some people may need more support than others. There are very few barriers for adult learners to use the Internet for independent learning. There is more than enough evidence that they are happy to do so and improve themselves in the process. Using new media participants can make leaps – 'bits and pieces', 'bite size morsels' – with immediate results.

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