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# Measuring the Impact of Literacy Programs on Social Inclusion, Health and Labour Market Participation: A Study of a Dutch Program

**Abstract:** Nowadays, 24.5% of the European population is still at risk of poverty and can be considered as citizens risking social exclusion. A low level of proficiency in literacy skills is indicated as one of the important reasons for social exclusion. It is argued that literacy programs for vulnerable adults act as a lever for the improvement of literacy and, in turn, for enhancing participants' social inclusion, health, as well as labour market position. However, to date, evidence of the impact of these programs is scarce. This study aims to fill this gap by measuring the outcomes of the Dutch program 'Language for Life' ('Taal voor het Leven'). The findings indicate that after five months, for many social inclusion indicators, more than half of the participants' group showed an increase. Improvement in physical and psychological health and labour market position is less prominent than improvement in the social inclusion indicators. This study does not only support the importance of a policy in literacy (on the national or regional level) aiming

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at increasing social inclusion by offering possibilities to improve language proficiency. Moreover, it aims to contribute to the investment in research aiming to monitor the outcomes of language programs.

**Keywords:** Literacy programs, adult learning, educational impact, literacy, social inclusion

## Introduction

Social inclusion has been at the centre of European policies since the 1970s (Podneiks, 2006). European Policy Agendas and Commission, such as the Social Policy Agenda and the Amsterdam Treaty, have paid particular attention to the problem of social exclusion and how to combat it (Atkinson et al., 2004). However, despite this interest, during the past years, Eurostat statistics have repeatedly indicated the increasing problem of social exclusion in European member states. In 2013 for example, overall, 24.5 % of the EU population were at risk of poverty or social exclusion (Eurostat, 2014).

The interest in the phenomenon of social inclusion has led to a wide variety of definitions and indicators. In general, social inclusion is defined as the opposite of social exclusion. Social exclusion can be defined as the outcome of processes which shut people out from the social, economic, political and cultural systems which contribute to the integration of a person into the community (Cappo, 2002). From an economic perspective, social exclusion is related to factors, which inhibit individuals from fully participating in society like health status, poverty and unemployment (e.g., Atkinson et al., 2004; Sparkes, 1999).

For adults, illiteracy, or the lack of reading and writing skills, is a severe barrier to dealing with issues at work and other domains in daily life, such as health, finances, and social life. Therefore, illiteracy has been argued as one of the cornerstones of social exclusion (e.g. European Commission, 2007, 2008). The multiple effects of low proficiency in literacy skills on social inclusion have been confirmed by the results of the 2013 OECD Survey of Adult Skills (as a product of the Programme for the International Assessment of Adult Competencies – PIAAC) indicating that in all countries included in the study, the respondents with lower proficiency in literacy, for example, were more likely than those with better literacy skills to report poor health (OECD, 2013). The extent of the problem of low proficiency in literacy is evidenced in OECD studies. For example, based on the results of this study in the Netherlands 12% of the population lacks literacy proficiency (Buisman et al., 2013).

Defining low proficiency in literacy skills as one of the most important levers of social exclusion has led to the plea of developing literacy programs to combat social exclusion, to enable vulnerable adults to meet the complexities that characterize their daily lives (e.g. Kumpulainen, 2010; Nillson, 2010). However, despite the plea for developing literacy programs for adults vulnerable in terms of social exclusion, the number of studies measuring the impact of educational interventions aiming to enhance literacy and social inclusion, is still quite scarce (Carpentieri, 2013). In this respect, scholars like Carpentieri (2013) as well as organisations such as the OECD underline the importance of questioning if existing literacy programs are effective (Windisch, 2015). With this study, we aim to provide evidence of the benefits for vulnerable adults participating in Dutch literacy programs in terms of increasing social inclusion as well as health and labour market position. The core research question is: to what extent do participants in Dutch Literacy programs show an increase in social inclusion indicators, health indicators and labour market position?

### **Literacy Programs and Increase in Social Inclusion**

To capture the complexity of the concept of social inclusion from a social perspective, various scholars define social inclusion as a multidimensional process of behavioural change depending on a person's interaction with different situations and with different environmental conditions. In this respect, based on identity theories and the socio-emotional selectivity theory, De Greef, Verté, and Segers (2014) define social inclusion on an individual level, referring to the processes of activation and internalization and on a collective level, referring to the processes of participation and connection. While activation and internalization describe social inclusion as processes that enhance functional and emotional satisfaction for the individual, participation and connection are concerned with the processes of enhancing the functional and emotional satisfaction for the individual in connection to the social environment (Verté et al., 2007).

Activation implies the acquisition of basic skills vital to cope with practical daily problems. According to Bjørkøe (2009), activation concerns the involvement of learners in meaningful and communicative activities leading to an increase of liveability within the direct surroundings referred to as functional satisfaction. Internalisation refers to the use of these basic skills and results in an increase of feelings of happiness and safety, or an increase of emotional satisfaction. Important basic skills are for example national language skills, international language skills, digital skills, assertiveness, upbringing and labour skills, voluntary

work skills, neighbourhood skills and contact skills (Andrews & Withey, 1974; Benjamin 1994; Huisman and Tubbing, 2005; Liu, 1974).

Participation refers to the growing functionality of an individual in connection to the environment. For example, engagement in social activities, which are available in their direct social environment and participation in the wider society are good examples of social inclusion through participation (Guildford, 2000; Verté et al., 2007). In contrast to functional participation in social activities, connection refers to the emotional satisfaction gained by having more and better connections to the environment. The process of connection contains the pursuit of intimacy and active commitment to others (Huisman et al., 2003; Santrock, 2008). Concretely, the processes of participation and connection refer to being active in associations and the neighbourhood, being active in nature and sports, being involved in arts and culture, developing intimate contacts and preventing loneliness.

In this study, for studying social inclusion, we combine the economic and social perspectives by focusing on health status and labour market position on the one hand and the processes of activation, internalisation, participation and connection on the other hand. Research conducted in the Netherlands (De Greef et al., 2012), using the same instruments as in this study, indicated circa 40% to 60% of the participants show an increase in scores on social inclusion indicators after participating in language courses, including language skills. Other evaluation studies of literacy programs focused only on outcomes in terms of level of literacy proficiency. In their report, based on a review of the studies of Alamprese et al. (2011), Sabatini et al. (2011), Greenberg et al. (2011) and Hock & Mellard (2011), Kok and Scholte (2013) indicate that participants of literacy programs on average show an increase of 5.2 % in scores on reading tests. Likewise, the Department of Labour in New Zealand (2010) evaluated the eighteen literacy courses offered by companies throughout New Zealand. The course took four to twelve months. The differences between pre- and post-test scores, among other writing skills, indicated that at the end of the courses, around 66 per cent of the participants had improved their writing score, 17 per cent showed a decrease in the writing score, and for 17 per cent, there was no change. In a recent study, Reder (2012) reported on the Longitudinal Study of Adult Learning (LSAL) which measured the growth of adults' literacy over nearly a decade. At six points in time in-depth interviews and assessments were conducted, measuring literacy proficiency, engagement in everyday literacy practices and self-perceived wave-to-wave changes in literacy skills and practices. The findings indicate no immediate relationship between proficiency change and participation in adult basic skills

programs. However, the results show significantly more perceived improvement in literacy proficiency over periods that included program participation than over periods that did not.

### **Literacy Programs and an Increase in Health**

In the 2013 WHO report, Kickbusch et al. (2013) are talking about a health literacy crisis in Europe and beyond. The results of the recent European Health Literacy Survey show that nearly 50% of all adults in the eight European countries tested have inadequate or problematic health literacy skills. According to Sørensen et al. (2012, p. 3), “health literacy is linked to literacy and entails people’s knowledge, motivation and competences to access, understand, appraise, and apply health information to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life during the life course”. In other words, literacy skills are needed to make use of the system of health care and ensure a healthy life. During the past decade, due to the increasing complexity of today’s healthcare systems, adults with low proficiency in literacy skills have experienced serious challenges in using them in daily life. If one has low proficiency in literacy, most current healthcare systems become difficult to understand and navigate. Not being able to read at a certain level of proficiency makes it nearly impossible to gain access to the health system.

During the past decades, many research studies have confirmed the relationship between literacy and health. The results of the systematic literature review by DeWalt, et al. (2004) evidenced that “reading ability is related to knowledge about health and health care, hospitalization, global measures of health, and some chronic diseases. People who read at lower levels are generally 1.5 to 3 times more likely to have an adverse outcome than people who read at higher levels” (DeWalt et al., 2004, p. 1236).

To date, many studies have been published on interventions to improve health outcomes for patients with low literacy. Review studies of DeWalt et al. (2004) and Pignone et al. (2005) addressed the effects of interventions to mitigate the effects of low literacy on health outcomes by adapting the health care to the level of literacy proficiency of the patients. On the contrary, no studies are published on the impact of general literacy programs, on participant’s health, supporting adult participants in the basic skills of reading and writing.

## Literacy Programs and an Increase in Labour Market Position

To explain labour market outcomes in terms of the degree of labour force participation, the extent of unemployment, and the wage or occupational status, many studies have focussed on the effects of formal initial education (years of education and level of education). However, studies such as the study of Chiswick et al. (2002) have evidenced that part of the improvement in labour market outcomes attributed to higher levels of education could be due to higher levels of proficiency in literacy and numeracy (Chiswick et al., 2002).

Nevertheless, the results from studies on the impact of literacy programs on labour market outcomes are inconclusive. The results of an interview study by Tett et al. (2006) showed that learners were positive about the likelihood of their literacy involvement improving their employment situation – 51% of the participants in literacy programs made additional comments on concrete improved job opportunities and promotional prospects. A study conducted in Dutch literacy programs (De Greef et al., 2012) indicated that 7% to 20% of the participants experience a to have a better labour market position (apprenticeship: 7%; paid job with guidance: 14%; seeking a job: 20%; paid job: 20%; voluntary work: 21%)

However, other studies have indicated that although participants in literacy programs believe that participation would lead to improved job opportunities, little evidence supports this belief. For example, the Malicky and Norman study (1994) showed that after following a literacy program, participants generally returned to the same low-paying temporary jobs they had before, due to the psychological, social and educational backgrounds of the participants.

### Research Questions

The general research question in this study is: to what extent do participants in Dutch Literacy programs show an increase in social inclusion indicators, health indicators and labour market position?

Social inclusion is defined from an economic and social perspective. This leads to the following specific questions:

- (1) Do participants in Dutch Literacy programs show the change in social inclusion in terms of activation, internalisation, participation and connection?
- (2) Do participants in Dutch Literacy programs show a change in experienced health?
- (3) Do participants in Dutch Literacy programs show a change in labour market position?

## Methodology

### *Research design*

To assess the changes in social inclusion, health and labour market position during a literacy program a single group pre-test / post-test approach is used. For ethical reasons, no control group (no participation in a literacy program) is included. Given the feelings of shame associated with having low proficiency in literacy skills and experiencing social exclusion, we consider it unethical to report to vulnerable adults low levels of literacy and, in turn, social inclusion (pre-test) while simultaneously denying them access to a literacy program.

### *Intervention: The Language for Life program*

The Dutch government has initiated programs for vulnerable adults to increase their social inclusion by improving their proficiency in literacy skills. One of these programs, developed by the Dutch Reading & Writing Foundation (Stichting Lezen & Schrijven), is the 'Language for Life' ('Taal voor het Leven') program. The Foundation develops and supports language courses in cooperation with regional adult education centres and local or regional language institutions in six regions of The Netherlands. The core aim of all courses is to support participants in acquiring a higher level of literacy proficiency to deal better with daily issues. These courses have a combined curriculum based on learning basic skills with a special focus on improving one's proficiency in literacy. More in detail, the learning contents and –activities focus on the use of basic skills (including literacy skills) in daily life and work. In other words, the courses seem to focus on improving the proficiency of functional literacy as explained by Bulajić et al. (2019). To sum up, the curriculum is based on a functional perspective of literacy skills connected to the participant's daily life and work environment.

### *Sample*

Demographics of the different samples can be found in Table 2. Most of the adult learners are female (65% to 75%) and a foreigner (90% to 95%). About half of the group of adult learners are 43 years or older (49% to 59%) and have mastered secondary school or lower (47% to 51%) (see Table 2). Furthermore, most of them just joined 10 years or less than 10 years of education (50% to

60%). Finally, there weren't any reports of learning difficulties among the learners (e.g., dyslexia and ADHD) to prevent biased teaching focusing on these learning difficulties.

**Table 1.** Socio-demographic characteristics

Characteristic / Category	SIT-instrument N = 297	Reading test N = 273	Writing test N = 180
Gender (male / female)	25 / 75	36 / 65	34 / 66
Nationality (autochthone / foreign)	5 / 95	10 / 90	10 / 90
Native speaker (Dutch / non Dutch)	*	12 / 88	9 / 91
<b>Age</b>			
<= 34	22	17	17
35 – 42	29	24	27
43 – 50	27	33	39
>= 51	22	26	17
<b>Highest level of education</b>			
Primary school	26	31	31
Secondary school	21	20	18
Further education on level of middle class	13	18	19
Higher education / University	21	17	16
Other	19	14	16
<b>Total years of education</b>			
< 5 years	21	24	24
6 - 10 years	29	36	34
11 - 15 years	28	25	25
> 16 years	21	16	17

\* These items have not been measured.

### *Instruments*

The reading and writing tests measure the level of proficiency in reading and writing referring to the Entry Level and Level 1F of the new framework for literacy and numeracy (including digital skills) of the Ministry of Education, Culture and Science (CINOP 2012). These levels refer to the first basic levels in proficiency of using daily language in private and working life. The tests are developed by a team of experts in reading and writing and are validated among



adult learners joining language programs comparable with the language programs of this study.

To assess the level of reading skills (focusing on if one can read basic texts in daily life) two parallel versions of a test are used consisting of 61 and 54 short questions. E.g., an example of a birth card is given, with the following question: A son is born: true or false? Or an advertisement in the newspaper, which one has to interpret by answering questions about the advertisement. The scores are expressed in percentages of response accuracy.

To assess the level of writing skills, specifically the ability to write basic texts in daily life, two parallel versions of a test are used, each consisting of 8 assignments with a total of 112 items. Example of an assignment: 'Complete the sentence with your own word' or 'Write a correct sentence with the provided words' or 'Write a letter to a friend to explain why you can't join his party'. The rubrics in the rating form refer to ten dimensions of writing. Learner answers are rated by two trained external assessors (not the teachers). The final score is the sum of the scores for all assignments, which results in a score from 0 to 112 and should be divided by the maximum score and multiplied by 100.

Social inclusion was measured by the following scales of the SIT-instrument of De Greef, Segers, and Verté (2010): 'national language skills', 'digital language skills', 'assertiveness', 'labour and upbringing skills', 'meeting and attempting', 'active in nature and sport' (see table 1). All items have to be answered on a scale of 1 to 10 concerning if the specific item suits the participant or not. For the scale measuring loneliness, the answering categories are 1 (yes), 2 (more or less), and 3 (no). We recorded the questions in such a way that we make it a positive interpretation, and call this 'preventing loneliness'. So, a higher score means less loneliness.

For measuring health, we followed the approach used in the Belgian Ageing Studies of Verté et al. (2007) which was based on the Medical Outcome Study (MOS) (Kempen et al., 1995). We measured physical health and psychological health (see Table 1), using a three-point and four-point Likert scale. Furthermore, the position on the labour market is assessed using five separate items: 'I have or function in a paid job', 'I do voluntary work', 'I am in an apprenticeship', 'I seek a job' and 'I have a paid job with guidance'. Respondents had to answer on a scale of 1 (applies not to me), to 10 (applies very much to me).

**Table 2.** Overview Social Inclusion indicators

Characteristic	Example item	Number of items	Cronbach's Alpha
<b>Social inclusion</b>			
National language skills	I can understand things that I see on TV	9	0.946
Digital language skills	I can use the internet	3	0.948
Assertiveness	I am self-confident	5	0.890
Labour- and upbringing skills	I have good parenting skills for raising my children	4	0.792
Meeting and attempting	I meet plenty of people	4	0.863
Being active in nature and sports	I take part in sports activities	4	0.765
Preventing loneliness	I have people to rely on when times are difficult	11	0.823
<b>Health</b>			
Physical health	My health has limited me in taking a little walk	7	0.881
Psychological health	I'm feeling unhappy and depressed	6	0.868
<b>Labour market position</b>			
Paid job	I have a paid job	1	Not applicable
Voluntary work	I'm doing voluntary work	1	Not applicable
Apprenticeship	I'm having an apprenticeship	1	Not applicable
To seek a job	I'm actively seeking for a job	1	Not applicable
Paid job with guidance	I have a paid job and someone is guiding me	1	Not applicable

Furthermore, respondents have been asked to answer questions concerning socio-demographic factors: gender, nationality, age, the highest level of education, total years of education, (un)employment and professional qualification.

### *Procedure*

At each learning centre or language institution instructors have been asked to participate in the research with their courses. This resulted in 103 classes of learners joining this study. A paper version of the SIT instrument, the reading test or the writing test was administered on location in class. If learners encountered problems during the filling out, these could be resolved directly. All learners were invited to fill out the SIT questionnaire. For the reading and writing test (as well

as the SIT questionnaire), several learner groups were selected, and within these groups, learners should have at least a proficiency level of A1 in the Dutch language. The post-test of the SIT questionnaire, the reading, and the writing test were administered 5 months after the pre-test.

The number of usable cases differs per instrument as shown in Table 1. There were three different groups of participants and each group used one of the tests or the SIT instrument. So none of the learners completed two tests, but only the SIT instrument (pre- and post-test), the reading test (pre- and post-test) or the writing test (pre- and post-test). Thus, not all instruments were offered to all learners, as this took too much time during the course itself and seemed to unpleasantly interfere with the course itself. On the other hand, not all learners were present at both the pre- and post-test. The following numbers show the number of learners, who filled in the questionnaire or test: SIT questionnaire 297 (443 pre-test, 297 post-test); reading test: 273 (503 pre-test, 273 post-test); writing test 180 (445 pre-test, 196 post-test).

### *Method of analysis*

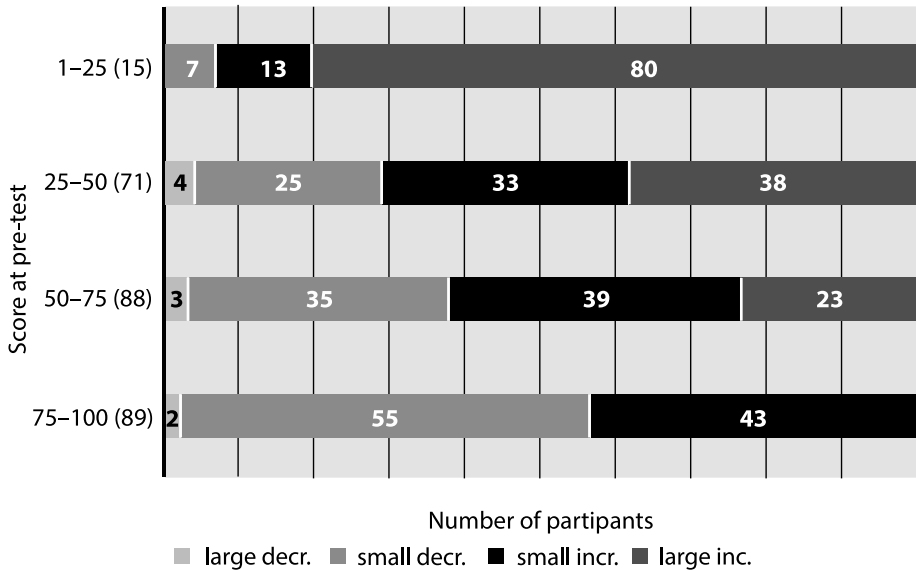
The extent of change in social inclusion variables, health and labour market position, was calculated as the percentage of change of the pre-test score  $(\text{post-test} - \text{pre-test score}) / \text{pre-test score} * 100$ . Subsequently, we made 4 categories, with 25% as cut of rate, resulting in 4 categories 1) a large decrease <<-25%; 2) a small decrease -25 to <0%; 3) a small increase > 0 to 25%; 4) large increase >> 25%. The magnitude and direction of change can depend on the starting position. Accordingly, for the participants with high scores on the pre-test the so-called ceiling effect can occur. For participants with a starting position at the lower end of a scale, it is much easier to improve than for participants at the higher end of a scale. Participants with a starting position at the higher end of the scale are more likely to show a decrease, so a negative change. Besides, to analyse if the change in the reading or writing test is significant a Paired Samples T-test has been conducted. Finally, to determine if elements of the learning environment or the socio-demographic factors influence the increase of change an analysis based on ANCOVA-tests, ANOVA tests, Chi-Square tests and t-tests.

## Results

### *Change in social inclusion*

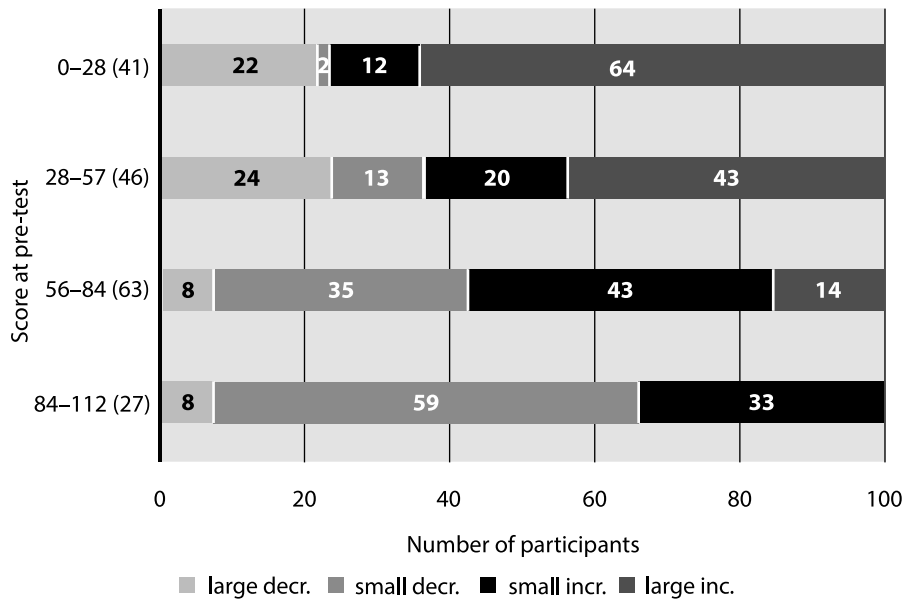
Concerning the variables assessing social inclusion the following changes can be observed.

Concerning the reading test 59% of the participants showed an improvement in reading skills (small plus large increase). According to Figure 1, participants with lower pre-test scores show the largest increase in reading skills (1–25: 93% and 25–50: 71%). Two categories with higher pre-test scores stay rather stable with some small decreases (35%; 55%) and small increases (39%; 43%).



**Figure 1.** Changes in reading test scores

Concerning the writing test 58% of the respondents improved their writing skills. According to Figure 2, the participants with lower pre-test scores showed the largest increase (64%; 43%), as well as the largest decrease (22%; 24%). The former was expected the latter was unexpected. Participants with higher pre-test scores stayed rather stable with mainly small decreases (35%; 59%) and small increases (43%; 33%). According to the results of the T-test, the change seems to be significant ( $T(272) = -5,561; p < .00$ ).



**Figure 2.** Changes in writing test scores

For (functional) national language skills, the results indicate an improvement for 71% of the participants. Participants with lower pre-test scores show the largest increase. Participants with the highest pre-test score show mainly a small or large decrease (see Figure 3A). Concerning digital skills 66% of the participants improve on this aspect. The group of participants with the highest pre-test score shows not only a small and large decrease but also a small increase (see Figure 3B). According to the results of the T-test, the change seems to be significant ( $T(179) = -2.856$ ;  $p < 0.005$ ).

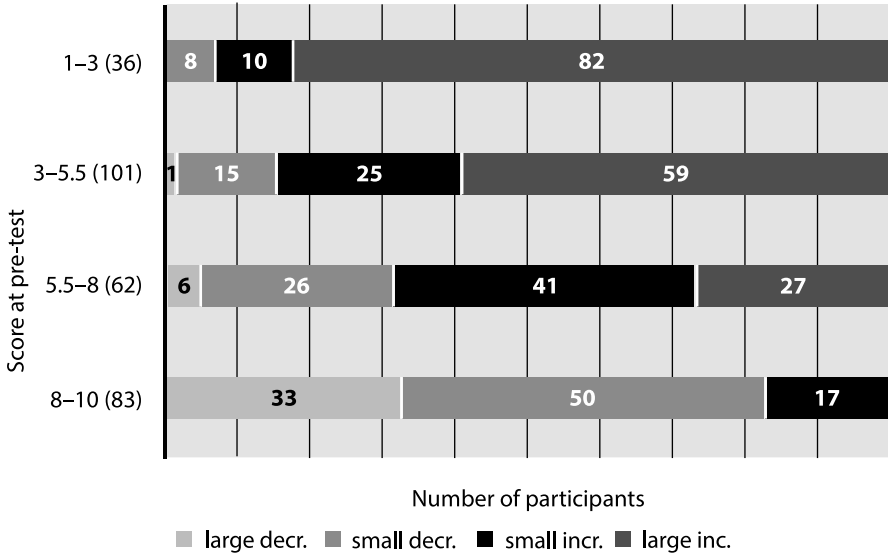


Figure 3A. Changes in national language skills scores

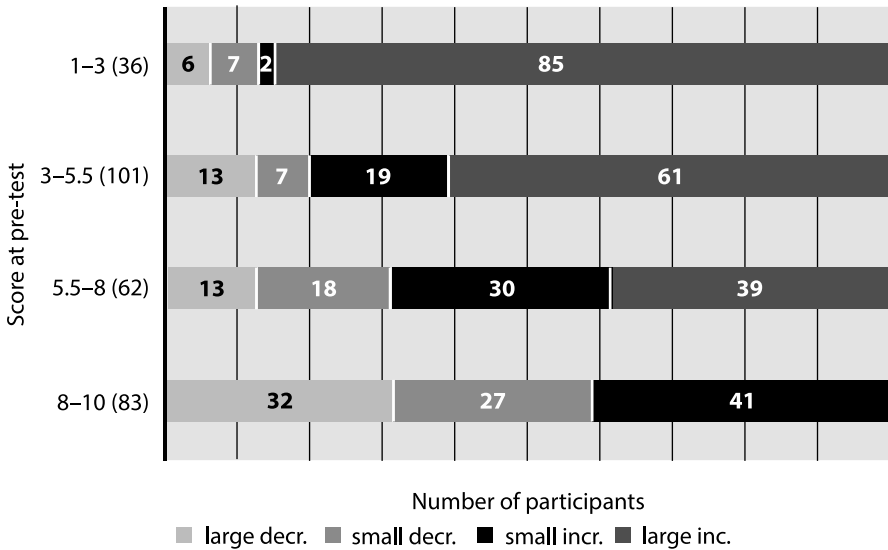
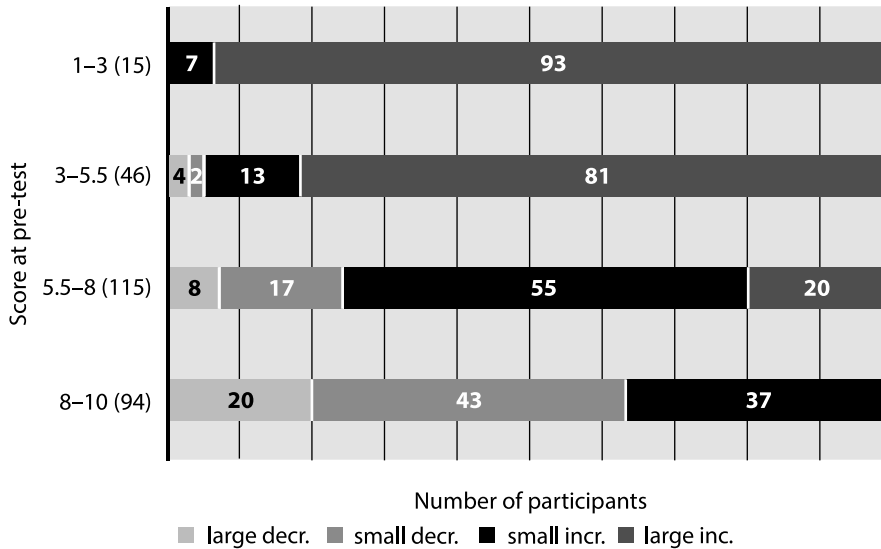


Figure 3B. Changes in digital skills scores

Besides, the score for assertiveness increased for 66% of the participants. Almost all participants in the two categories with the smallest pre-test scores show

a large increase. On the contrary, participants with a medium initial score show a small increase, while the category exhibits a small decrease (see Figure 3C).



**Figure 3C.** Changes in assertiveness scores

Labour and upbringing skills increased for 48% of the participants. It follows the same pattern as for assertiveness. Almost all participants in the two categories with the smallest pre-test score show a large increase and participants with the highest pre-test score show a small increase. The lower percentage of increase compared to the other variables can be explained by the rather high pre-test score (see Figure 3D).

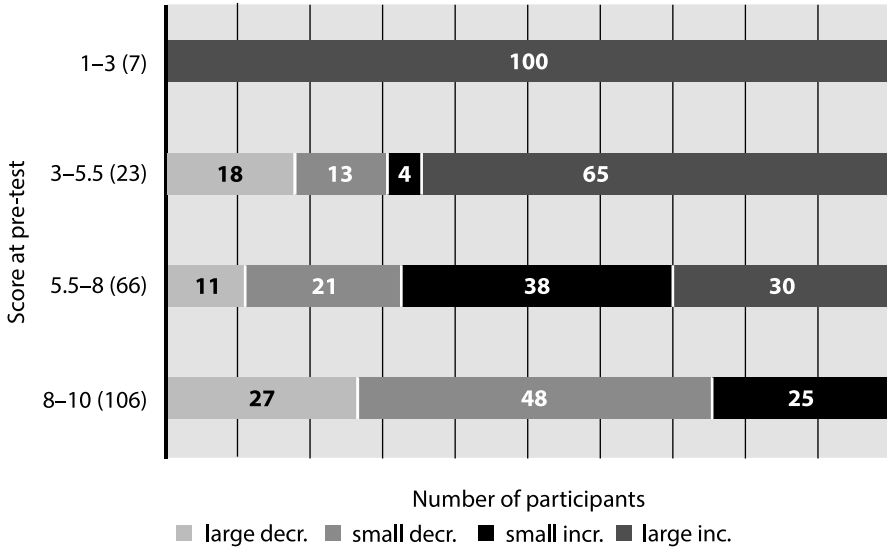


Figure 3D. Changes in labour and upbringing skills scores

Meeting and attempting increased for 58% of the participants. Also for this scale, the two categories with the lower pre-test scores experience a large increase. The category with the highest initial scores is characterized by high percentages for large and small decreases (see Figure 3E). Furthermore, engagement in nature and sports has increased for 57% of the participants. Large increases can be observed for those with lower initial scores (see Figure 3F).

For the final social inclusion indicator, preventing loneliness, due to the small range of the answer scale (1–3), two pre-test categories were created. Fifty-one per cent of the participants experienced an improvement. Participants in the low pre-test scores category show large increases, while those in the high pre-test score category show small decreases (see Figure 3G).



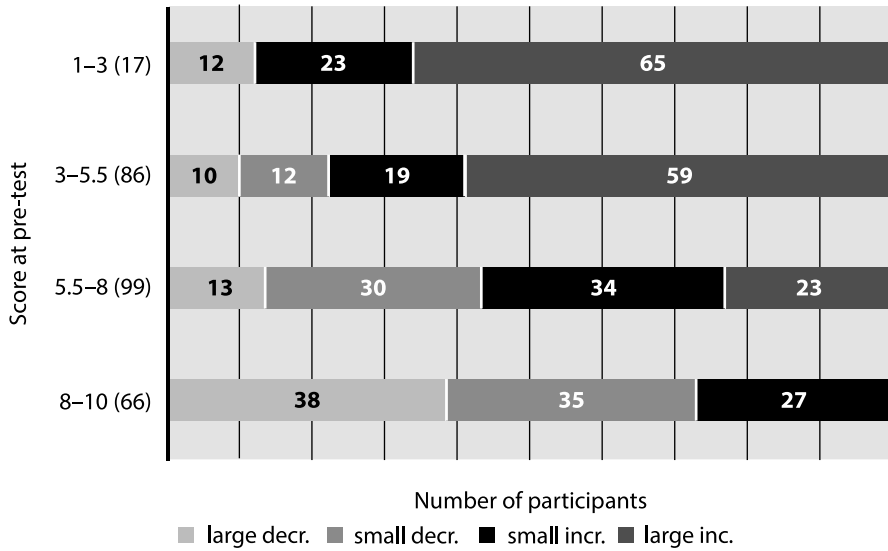


Figure 3E. Changes in meeting and attempting scores

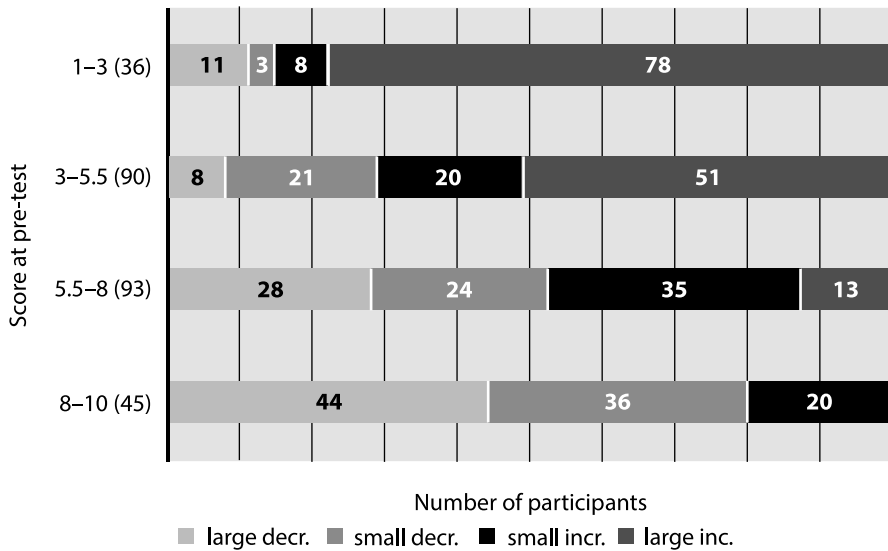
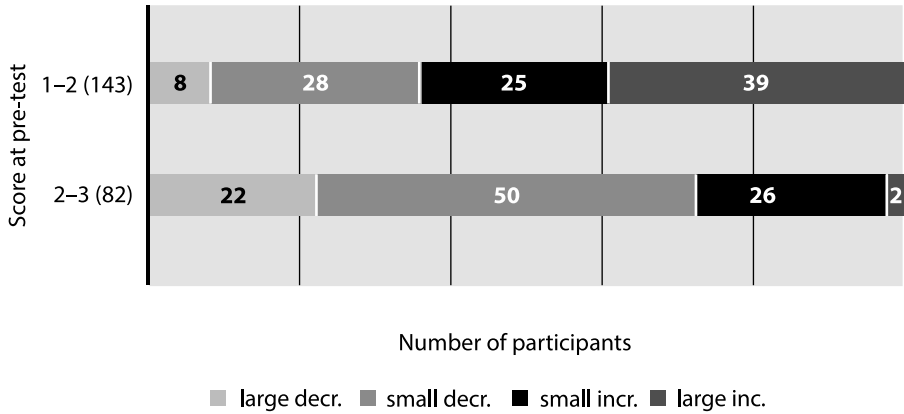


Figure 3F. Changes in scores on being active in nature and sports scores



**Figure 3G.** Changes preventing loneliness scores

To conclude, improvements in scores range between 48% and 71%. The highest scores are achieved for national language skills (71%), digital skills (66%), and assertiveness (66%). The lowest improvement applies to labour and upbringing skills (48%) and preventing loneliness (51%). For all scores, a similar pattern can be observed, known as the “ceiling effect.” Participants with low pre-test scores mainly show small and large increases, while participants with higher pre-test scores mainly exhibit some small decreases or, to a lesser extent, a large decrease.

### *Change in health*

For physical and psychological health, due to the limited range of answering categories, a different categorization of pre-test scores was used for both scales. Self-perceived physical health has increased for 39% of the participants. This is mainly attributed to a large increase in participants with low pre-test scores (see Figure 4A). Psychological health increased for 53% of the participants. Most participants in the low pre-test scores category showed a high increase; however, the number of participants in this category is small. Participants in the high pre-test scores category exhibit both small decreases and increases (see Figure 4B). In conclusion, less than half of the participants experienced an increase. However, a large group of participants had high pre-test scores, making improvements challenging to achieve.

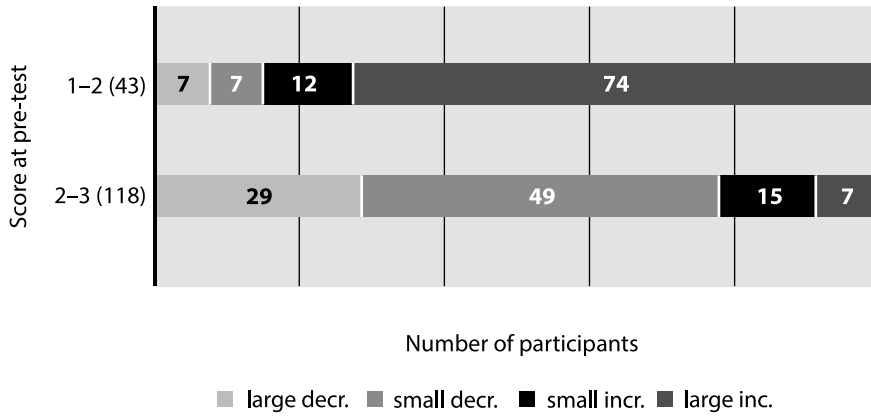


Figure 4A. Changes in physical health scores

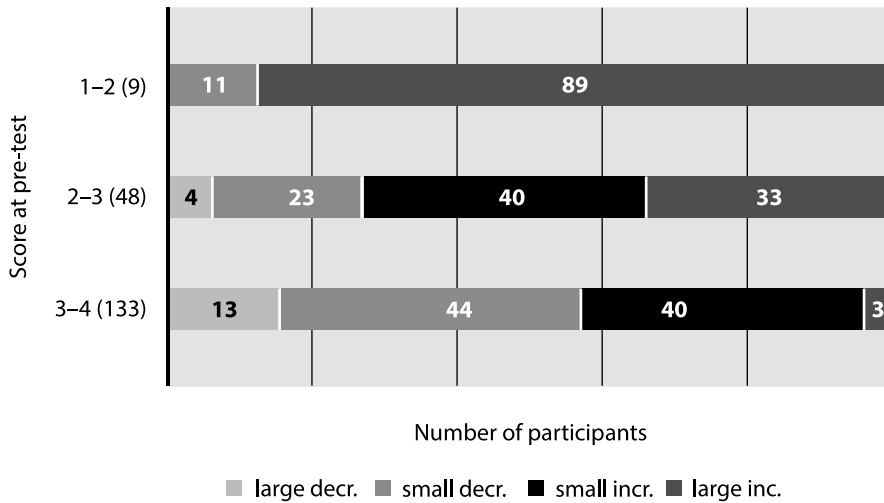
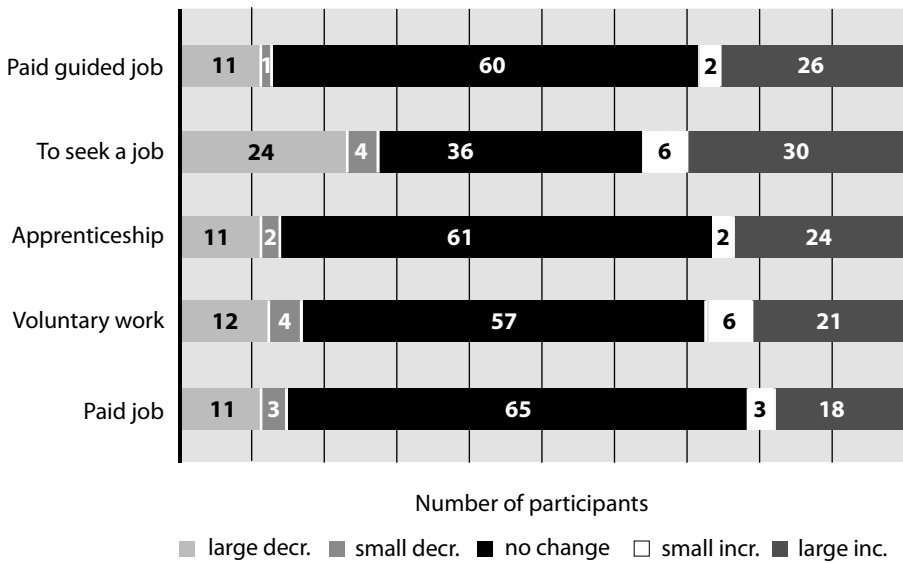


Figure 4B. Changes in psychological health scores

*Change in labour market position*

The position on the labour market was assessed using 5 questions, each addressing a specific role in the labour market. The questions are not exclusive; participants can have multiple positions, such as being a volunteer and searching for a job. The pattern for the position ‘searching for a job’ differs from the other posi-

tions. There is a rather high score for both a large decrease and a large increase, and a low score for small changes (increase or decrease). This indicates some dynamics for this position. Participants indicating a decrease may have found a job and are no longer searching, while participants indicating an increase may have become more active and are now eager to find a job. The other positions are characterized by relatively high percentages for no change. Between 21% and 36% of the participants indicate an increase. So, for these positions, there is less observed increase (see Figure 5).



**Figure 5.** Changes in labour market position scores

### *Influential factors*

Based on the analysis of the influence of the elements of the learning environment and sociodemographic factors conducted by ANCOVA tests, ANOVA tests, Chi-Square tests, and t-tests, it becomes clear that none of the elements of the learning environment and sociodemographic factors has a significant influence on the increase of the reading and writing scores. On the contrary, some of these elements of the learning environment and socio-demographic factors influence the variables of the SIT instrument, to mention:

- Gender has a significant impact on 'Labour and upbringing skills' by which the increase among women is larger ( $\chi^2(1, N = 90) = 0.89, p = .03$ ).
- Diploma has a significant impact on 'Psychological health' by which the increase among participants with a diploma is larger ( $\chi^2(3, N = 168) = 8.33, p = .04$ ).
- The support of the teacher has a significant impact on 'Meeting and attempting' ( $F(3, 167) = 2.66, p = .05$ ) and 'Being active in nature and Sports' ( $F(3, 159) = 3.32, p = .02$ ).
- The learning contents and –activities have a significant impact on 'National language skills' ( $F(3, 273) = 4.31, p = .005$ ).
- The transfer possibilities have a significant impact on 'Physical health' ( $F(3, 133) = 4.67, p = .004$ ).
- The support of a volunteer has a significant impact on 'Assertiveness' ( $F(3, 21) = 2.74, p = .045$ ) and 'Labour– and upbringing skills' ( $F(3, 154) = 3.06, p = .03$ ).

## Conclusions and Discussion

This study provides an answer to the question if and to what extent adult participants experience an increase in social inclusion after joining a language course as part of the program 'Language for Life.

The results indicate that 48% to 71% of participants experienced an increase in the social inclusion indicators, except for health and labour market positions. Concerning the latter, a smaller group of participants experienced an increase.

Benchmarking these findings is difficult as the results of former studies are inconclusive, with some studies reporting moderate increases in proficiency (Department of Labour in New Zealand) while others (Reder, 2012) show no relation between participation in basic skills programs and an increase in literacy test scores. In addition to the inconclusiveness (and related to it), the studies differ in the instruments used, the points of measurement and methods of analysis.

Compared to the Longitudinal Study of Adult Learning (Reder, 2012) showing no impact of participation in basic skills programs on reading and writing skills, our data show an increase in literacy skills from 59% (reading) to 58% (writing) of the participants. This might be due to the specific character of the courses in our study. They do not focus on the development of

literacy skills per se, but on increasing social inclusion via the improvement of language skills.

The study conducted by the Department of Labour in New Zealand (2010) shows better writing skills for 66% of the adults after joining basic skills programs. However, in this case, post-tests were administered after the courses which took on average 6 to 9 months, whereas in our study the post-test was administered after 5 months. This difference in measurement period might explain the difference in impact.

When we compare the other social inclusion data reported here with the data collected in other Dutch literacy programs, using the same instruments and data collection procedures (De Greef et al., 2012), the Language for Life courses reported here show more positive outcomes. The 2012 data indicate an increase of 42% (labour and upbringing skills) to 58% (national language skills) of the participants, while our data show increases of 51% (preventing loneliness) to 71% (national language skills) of the participants.

Physical health has increased for 39% of the participants while psychological health increased for 53% of the participants. Given no comparable studies have been found, benchmarking these findings is not possible. However, compared to the rate of increase for the social inclusion indicators (between 48% and 71% of the participants showing an increase), the increase is less prominent. It might be questioned if especially the findings for the increase in physical health are due to the fact that the contents of the courses are not specifically targeted towards health literacy. Being able to deal with a medical system in a country might ask for language courses more specifically targeted towards health literacy.

For the labour market position, the findings show that between 21% and 36% of the participants indicate an increase for changes in their labour market position. Compared to the data collected in other Dutch literacy programs (De Greef et al., 2012), the outcomes of the Language for Life program in terms of labour market position are more positive: 7% to 21% of the participants indicate a change in labour market positions (De Greef et al., 2012) versus 21% to 36% of the participants after joining the Language for Life program.

According to the results of the analysis, it seems that mostly the elements of the learning environment influence the increase of the variables in social inclusion. The influence of the socio-demographic factors seems to be rather small. Finally, it becomes clear that it was not possible to determine a significant influence of the elements of the learning environment and the socio-demographic factors on the increase of reading and writing skills.

### *Directions for future research*

Although the data reported in this study offer interesting insights into the various outcomes of language courses for vulnerable adults, several questions remain open for future research.

Firstly, the use of objective measures (reading and writing tests) as well as self-reporting questionnaires is an important step in collecting evidence on the impact of language courses for vulnerable adults. However, monitoring the impact of language courses by administering assessments in different consecutive waves is necessary to cross-validate our findings in the long term. We agree with the UNESCO Institute for Lifelong Learning (2010), which argues that programs concerning adult literacy should not be reviewed incidentally but on a systematic basis. Only then can policymakers and researchers bridge the gap between research and policymaking in adult education. In other words, only then will it be possible to translate research results into new adult education policies framed by the outcomes of impact studies.

Secondly, it is not yet clear which elements of the learning environment in language courses contribute to the increase in social inclusion. Although different strands of research, such as learning environments research and transfer of training research, have provided evidence of dimensions of the learning environment contributing to learning gains, for adult literacy programs, evidence is very scarce. To develop a framework of quality indicators for adult education programs (as part of an adult education policy) to optimize their effectiveness, this evidence is necessary.

### *Implications for policy*

According to the results of this study, it appears that the language courses organized by the Dutch regional adult education centers and language institutions, in cooperation with the Dutch Reading & Writing Foundation as part of the program 'Language for Life,' show promise in terms of increasing social inclusion, health, and labor market position.

The findings of this study have influenced the decision of the Dutch Ministry of Education, Culture, and Science to implement this program throughout the Netherlands and include it in a new action strategy to prevent and address low proficiency in literacy skills. This underscores the importance of developing and implementing tools to monitor the impact of language courses on social inclusion, health, and labour market position. The findings can assist policymakers in prioritizing investments in adult education to combat social exclusion.

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## Merenje uticaja programa pismenosti na socijalno uključivanje, zdravlje i učešće na tržištu rada: studija holandskog programa

**Apstrakt:** Danas 24,5% evropske populacije živi u riziku od siromaštva i mogu se smatrati građanima koji su u riziku od socijalne isključenosti. Nizak nivo veština pismenosti je jedan od ključnih razloga socijalne isključenosti. Tvrdi se da programi pismenosti za ranjive grupe odraslih deluju kao pokretač za poboljšanje pismenosti, a time i za unapređenje socijalnog uključivanja, zdravlja i položaja na tržištu rada. Međutim, dokaza o uticaju tih programa još uvek nema u dovoljnoj meri. Ova studija ima cilj da popuni taj jaz merenjem rezultata holandskog programa *Jezik za život* ("Taal voor het Leven"). Rezultati istraživanja pokazuju da, nakon pet meseci, za mnoge indikatore socijalnog uključivanja, više od polovina grupe učesnika pokazuje napredak. Poboljšanje fizičkog i psihološkog zdravlja, kao i položaj na tržištu rada manje su izraženi nego poboljšanje u pogledu indikatora socijalnog uključivanja. Ova studija ne podržava samo važnost politike pismenosti (na nacionalnom ili regionalnom nivou) čiji je cilj povećanje socijalnog uključivanja nuđenjem mogućnosti za unapređenje jezičke sposobnosti, već ima cilj da doprinese ulaganju u istraživanje i praćenje rezultata programa pismenosti.

**Ključne reči:** programi pismenosti, učenje odraslih, obrazovni uticaj, pismenost, socijalno uključivanje

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