The Wider Benefits of Learning

Part 1: Learning and Identity

1

The Wider Benefits of Learning

Part 1: Learning and Identity

Centre for Research on the Wider Benefits of Learning
Institute of Education, University of London

Rodie Akerman, John Vorhaus and John Brown

Contents

Contents

Foreword

For centuries, scholars searched for a miraculous substance that would make people happy, healthy, wealthy and able to enjoy life. A panacea that would help them deal successfully with life's difficulties, better understand themselves and the world, and ultimately gain wisdom they could transmit to future generations.

Today, science has found this magic formula. The trouble is that virtually no one knows that it exists, where and how to find it and what miraculous effects it has when properly used. At the same time, renowned researchers are proving its effectiveness in increasing numbers of international studies. It works on everyone, everywhere, from infancy to old age, in all of life's circumstances and spheres. It has an unending number of side effects – all of them positive and good for people. As for how much of it to apply, the only mistake we can make is not to use enough. That's because the more of this magic formula people use and the more often they use it, the better they feel, scientists have unanimously determined. And when people feel better, statisticians have recently proven in comparisons of countries throughout Europe, so do the regions and countries where they live with others.

In fact, everyone knows this miracle substance and many are already using it. However, in most cases it cannot sufficiently produce its effects. Most people totally misunderstand it because too often, it has been prescribed incorrectly and in the wrong dose. The miracle substance that science has discovered is nothing other than learning. But not just learning in schools and educational institutions, much too often discussed only as it relates to finding employment or enhancing corporate and national competitiveness. The real magic formula is learning in all of life's phases and aspects – lifelong and "life-wide."

It may seem inappropriate to speak of a miracle and science in the same breath. But the human brain and its ability to learn are among the greatest miracles in our known universe. And the miracle of learning and cognition within our brain a) is only barely understood by even the best and most advanced scientists, and b) these scientists themselves admit that the more they investigate, the more they discover ever greater miracles about the brain's complexity, capacity and plasticity. (More insight into these interconnections can be found in the Bertelsmann Stiftung publication entitled "Warum Lernen Glücklich Macht" [Why Learning Makes You Happy]. In short, science still considers the fact that human beings learn and how they learn to be a kind of miracle.

Researchers throughout the world have begun to investigate the positive effects of lifelong learning on individuals and society. And the more interconnections and relationships between learning and life processes they study, the more multifaceted, surprising and unambiguous their results have been. They already agree on one conclusion: If we want to unleash the

miraculous effects of learning, we first have to understand learning in its diverse forms, possibilities and effects in a completely different way.

Educational research, generating much public interest, has shown how successful schooling, vocational training and university attendance affect income and job opportunities, and how closely education and skills development are related to a society's economic prosperity. On the other hand, the public has heard virtually nothing about the happiness that is derived from learning or the pleasure of curiosity and discovery, or from personal development and the ability to continually change oneself. Too little attention is paid to the connections between learning and gains in resilience, physical and mental health, participation in social life and social solidarity, all of which have also been scientifically investigated.

To survey the current status of research on the diverse effects of lifelong learning, the Centre for the Wider Benefits of Learning at the Institute of Education of the University of London, at the request of Bertelsmann Stiftung, has prepared a comprehensive review of the literature on the social and personal benefits of learning. The scope of the published findings has persuaded the editor to present this survey thematically, in sections.

This first of five parts focuses on the close reciprocal effects between learning and identity.

The study on wider benefits of learning

Learning and well-being – a look at complex relationships

Although the term "learning" has already become central to the discussion of economic and social policy in Europe, most of these countries lack both clarity and understanding of the specific learning relationships involved. Learning is considered the key to success for individuals, organizations, regions and nations, leading to greater economic affluence for knowledge societies. But the complex phenomenon of learning is often reduced to formal education and its consequences for employability.

Similarly, scientific research into the interconnections in education has been essentially devoted to studying formal learning in school and other educational institutions. For years, data has been systematically collected on the performance of secondary and post-secondary students. The number of scientific studies and research papers in this area has risen dramatically. There have also been studies on the value of vocational training, continuing vocational training and – to a lesser extent – adult learning for the job market. But with the dominant focus on the economic consequences of formal learning processes, the holistic and social effects of learning have received comparatively little attention.

In fact, growing numbers of international scientists have begun to investigate the positive main and side effects of lifelong and life-wide learning beyond the economic impact on individuals and society: What are the effects of learning, for example, on the development of identity, self-consciousness, motivation and resilience? On our ability to continually adjust to changing living conditions? How does learning affect our health, life expectancy and birth rate? Or, to take just one example, our ability to come to grips with an increasingly complicated healthcare system? What forms of learning result in greater well-being, greater life satisfaction and happiness? And what are the effects of learning processes on social cohesion and vitality – in neighborhoods and associations, municipalities, regions and whole societies? To what extent does learning influence personal willingness to integrate, be tolerant, show solidarity and become politically and socially engaged? And what factors can best improve the framework conditions and circumstances for every form of learning at every age?

Without exception, results of the studies by international scientists indicate that the key to future well-being, happiness, social cohesion and – as just one important positive consequence out of many – personal and national economic development in Europe lies exactly in the widely ignored effects of lifelong and life-wide learning processes. Until now, the conclusions of these studies and research have never been assembled, correlated and made available to a broader public. The following survey of the status of international research is intended to close that gap.

Intention of the study on wider benefits of learning

Within the framework of the European Lifelong Learning Indicators (ELLI) project, the Centre for the Wider Benefits of Learning at the University of London's Institute of Education was asked to assemble all internationally available scientific studies on the effects of the various forms of lifelong and life-wide learning on individual and social development, evaluate them and summarize them in a comprehensive report. In fact, this survey of the state of research on the social and personal benefits of learning reflects the findings of more than 200 international studies and research projects on the effects of learning in all phases and areas of life. We decided to split up this voluminous collection of material into five complementary categories and publish them in the form of five individual studies. Each individual study examines a central connection between the various forms and stages of lifelong learning and an aspect relevant to personality or social development.

The individual studies are not intended to provide comprehensive and final answers on the effects of lifelong learning in the particular category. Instead, they show the current science as a work in progress - and it is hoped that they will stimulate further research efforts.

Overview of the five parts of the study

Part 1: Learning and identity

The first study covers the scientific discussion of the reciprocal relationship between lifelong learning processes and the development of human identity. Numerous studies show that the forms and quality of formal, non-formal and informal learning in various phases of our lives impact our self-confidence, self-esteem, resilience and the development of social skills, and look at how they do it. And in addition, they examine how – through the concepts of self that are affected by learning processes – these forms of learning then impact future learning behavior and internal attitudes toward learning later in life.

Part 2: Learning and health

The second study collects the relevant studies on the effects of learning on physical and mental health. Numerous studies have made clear the direct relationship between the duration and frequency of learning processes in various phases of life and mental and physical well-being, health behavior, life expectancy and numerous other physical and mental health aspects. Likewise, studies show how learning behavior affects our ability to find our way through an increasingly complex medical system.

The study on wider benefits of learning

Part 3: Learning, life satisfaction and happiness

The third study summarizes findings about the consequences of learning for the well-being, quality of life, happiness and optimism of people. It examines research on the effects of both learning in school as well as adult learning on a positive attitude toward life. Besides showing a positive correlation between learning and happiness, this part of the study makes it clear that the scope of research efforts lags far behind the importance of this crucial field of knowledge.

Part 4: Learning and community vitality

The fourth study looks at a broad spectrum of research results on the effects of formal, non-formal and informal learning processes on social cohesiveness and community vitality. Given the diverse and complex interconnections it examines, this individual study is divided into four sub-chapters. The first looks at the effects of lifelong learning on social inequality, income differences, social mobility – and the influence of learning sequences on social cooperation in a society. The second discusses the effects of learning on active citizenship, the possibilities of social participation and the integration of immigrants. Also considered is how participation in learning processes can be combined with aspects of interpersonal behavior such as trust, tolerance and inter-cultural sensitivity. The third sub-chapter deals with the concept of "social capital" and describes how learning contributes to developing individual and community social capital. The final section deals conceptually and statistically with the connections between learning and criminality and thus how specific learning processes and educational interventions affect criminal behavior.

Part 5: Learning spill-overs and interplays

The fifth and last study describes the numerous positive "side effects" of learning, which cannot be directly ascribed to the categories already listed but are of substantial importance for human well-being and the positive development of societies. Unlike the previous four categories of the accompanying study, which look at the more or less direct effects of learning processes on individual and social development aspects, this section looks at some more complex reciprocal effects of learning and living processes. Thus it illustrates how positive learning experiences impact people's future learning behavior, followed by the complex relationships between learning and occupational prospects. In addition, it explores the multifaceted impacts of learning on family situations. These include, for example, the influence of the educational and learning level of parents on the development of their children or the effects of learning processes in which parents and children participate together. The influence of the learning behavior of adults on their children's academic success and birth weight, family structure and size, marriage and divorce and parental behavior in early and later development phases of their children is also described. Finally, the study discusses the influence of the learning behavior of adults on their immediate neighborhood and accordingly how learning affects processes of sustainable development and the search for social justice.

This thematic structure of the survey of research results offers a better overview of the diverse aspects of the positive impacts of learning on people and societies. However, interdependencies between the various areas should not be ignored because in the final analysis, the individual and social effects of learning are never one-dimensional or limited to specific spheres of life.

Instead, every learning experience influences the whole person – and accordingly the society in which that person lives.

This survey of research results on the positive impacts of learning on people and society is another important component of the ELLI project as a whole, to continue to complete the picture of lifelong learning and its positive effects on people and societies. As a mirror of the status quo of research, it is intended to provoke new and different ways of thinking about the meaning and design of formal, non-formal and informal learning processes for both individuals and society.

Focus: Learning and identity

Introduction and overview

The first part of "The Wider Benefits of Learning" study is concerned with the effects of lifelong learning on our identity, self-confidence, motivation and resilience so that we can find our way in the ever greater complexities of the world we live in. That is because who we are, what meaning we find in life, what we believe we can accomplish, whether we will triumph over adversity and develop our lives in the way we want - all depend essentially on our learning behavior, as numerous scientific studies have shown. And that's not all. Our understanding of ourselves and our identity experiences in turn affect our curiosity and determine whether we have the courage to learn, to believe we can deal with the new and have an interest in other people and the world. In short, our learning experiences shape our self-image – and the image we have of ourselves has a decisive influence on whether and how we want to continue to learn.

Investigating the complex, reciprocal interaction of learning processes and identity development may be more important today than ever before. And not just in children and adolescents: specifically in the potential for expanding and changing the learning personality of adults and seniors. That is because the transformation of European countries into modern knowledge societies, capable of facing the future, requires everyone – whatever their origin and cultural and social background – to have a capacity for change and development that can ultimately only be sustained by a lifelong willingness to learn.

The days of straight-line lives, simple role models and careers for which jobs were virtually guaranteed, where we educated ourselves once in our lives and then made do with that supply of knowledge and skills, is over – at least for now, if not permanently. We constantly have to learn, in order to find our way in new situations, relationships and networks – and recognize what we already know at the same time as we realize what we still have to learn. This extremely mobile and dynamic form of personal identity presupposes a dynamic and positive attitude toward learning. It no longer matters what we have already become based on our past learning. What counts instead is what we can still become, through what we learn next. That requires what developmental psychologists call lifelong ego plasticity, i.e., a changeable self-model which we, as learning personalities, use to shape ourselves.

Contrary to a view still frequently encountered, the influence of learning processes on our self-image does not stop with school or childhood. Learning contributes to greater self-esteem and self-confidence for adults as well. As studies of the effects of vocational learning, non-formal and informal adult education show, a multiplicity of learning opportunities and learning experiences in a wide range of situations help people experience positive changes in their views of their own life at every age and in every life situation.

In fact, science has demonstrated that the conditions and situations in which we learn are incredibly important for how our personality develops. And while what and how much we learn matters, so does when, how, where and not least with whom we learn. Scientists believe that learning per se is not decisive for personality development – but rather the quality of the learning experience. It turns out that the effects of learning are not limited to our objective and technical performance in a formal field or the acquisition of occupationally relevant proof of skills and qualifications. Instead, through learning we develop

as whole human beings. We learn not only to know and to act but also, as self-aware personalities, to live together with other people and design our own lives.

Formal testing, grades and certificates generally give no indication of the conditions under which the required learning took place. Also lacking is any link to how these learning experiences may impact an individual's self-image and personality development. In fact, these frequently ignored developmental dimensions of every learning process are not simply vitally important for us as individuals, but also for the society in which we live. The interplay of our learning and identity development with our social surroundings shows up in numerous and complex facets. Social inclusion and participation, opportunities for social mobility, engagement, tolerance and mutual respect - all these basic aspects of social cohesion develop above all, as researchers have discovered, in our learning experiences and their effects on our self-image.

Only in recent years has science begun to investigate the connection between learning and identity development. Until now, the lion's share of research has been concentrated on the identity-creating aspects of formal schooling. This study summarizes numerous studies that show from various perspectives the influence of schooling on identity development – and then on the further learning development – of young people.

It becomes apparent that besides content, such aspects as high teacher expectations, a high degree of learning autonomy in a teacher relationship based on trust and respect, and a curriculum with many connections to the world the students live in all have a positive influence on the self-image and self-

confidence of children and adolescents. In contrast, a total focus on performance excludes too many students who do not achieve top level performance – and creates negative effects that can be offset in later life only with great difficulty.

It turns out that grouping students with varying levels of talent has an essential influence on personality development. While highly gifted students derive advantages for their social and emotional development if they learn exclusively with equally strong students, less gifted students experience substantial developmental disadvantages if they remain in a homogeneous group. The various studies that have shed light on this connection unanimously recommend that students in an equitable society should study in heterogeneous groups, particularly in light of the evidence about their ability to help one another – and thereby essentially improve their own self-confidence and behavior from dealing with other and different people.

Another essential area of research in this context involves the effects of transitioning between different school types on student self-confidence and self-esteem. It seems that the choice or change of a type of school can have decisive effects on the self-image of young people.

Meanwhile, another research area in the study summarizes scientific findings on the effects of informal learning through youth work, which can be especially helpful in assisting personality development and self-confidence that for various reasons hasn't been promoted or fails altogether in school. Numerous studies indicate that non-formal youth work programs are very well suited to enhancing the development of self-confidence and resilience in young people, which then leads to better and more versatile learning achievement.

Focus: Learning and identity

There is also a series of studies involving informal adult learning – both job-related and recreational. They make it clear that promoting informal learning processes at work substantially improves team performance and self-efficacy, employee communication and decision-making as well as the implementation of continuous improvement and quality management processes.

At the same time, they also show that informal learning outside work leads to more self-confidence, greater resilience and deeper self-understanding. In surveys, for example, people of both genders, every age and the most varied social and cultural backgrounds, in every occupational group and educational level, living in family constellations of every kind, acquire an improved sense of self-worth as well as a stronger feeling of meaning and hope from self-determined learning experiences in their adult life.

When science examines relationships between learning and identity, it looks at issues of decisive importance for individual and social development. How should we change and create learning conditions that will promote the development of people who are more self-confident, more cognitively flexible, critical and resilient? What are the prerequisites and conditions for learning opportunities if they are to support identity development in people of different ages – in schools, universities, job training and continuing education as well as in the many informal learning subjects? As long as we fail to consider these interconnections, we cannot make meaningful, promising and sustainable decisions about either the appropriate organization or the amount of funding to invest in such areas of learning.

In this part of the study, we want to show that learning and identity are inextricably interlinked. Through our lifelong learning experiences, we come to know ourselves and our abilities better and can define, expand and change our self-image. Self-determination, critical faculties, motivation, commitment, social participation and tolerance of others are just some of the direct impacts of the interplay of learning and identity development. Many of the aspects of non-formal and informal learning and their effects on identity are just being recognized. As a result, there are as yet no studies of how cooking, hobbies, volunteering, etc. affect self-image. Such studies would certainly be desirable.

Research results in detail

1. An introduction to self-concepts

The development of an individual's identity, through self-concepts such as self-esteem and self-efficacy, is of great value for both individual and society, as it underpins learning. Self-concepts can relate to academic capabilities, social capabilities, or general self-worth – they are multi-dimensional (Shavelson and Marsh, 1986) – but in general they concern an individual's perception of their own abilities and worth, and depend on the information available to the individual and the cognitive ability to process that information (Markus and Wurf, 1987). Schuller (2009, p.15) characterizes this quality as identity capital, which he defines as "the ability to maintain healthy self-esteem and a sense of meaning and purpose in life."

Self-concepts of ability and worth have an impact upon, and are affected by, other psycho-social factors such resilience and decisions over whether to do something immediately or in the future. If an individual has a sufficient regard for themselves generally, and of their abilities in particular, they will tend to consider themselves capable (or efficacious), be more inclined to persevere in the face of adversity (resilience), and take care of themselves not only in the here and now, but also in the future.

1.1 Self-efficacy

Self-efficacy is described by Bandura (1994) as an individual's confidence in their ability to organize and execute a given course of action to solve a problem or accomplish a task. It may apply specifically to a particular competence, or more generally. Self-efficacy in relation to learning is an important determinant of motivation, which in turn supports active engagement in learning (Eccles et al. 1997).

Parents' and teachers' perceptions of children's competencies and likely success are important influences on children's beliefs about their efficacy. These perceptions may be communicated through verbal persuasion and also in more subtle, non-verbal ways. Both home and school play important roles in the development of self-efficacy, and they should be understood as parts of an interacting and reinforcing system of influences.

1.2 Resilience

Resilience is a construct describing positive adaptation despite being exposed to adversity (Luthar et al. 2000; Schoon and Bynner 2003). It is not a personality attribute, but rather a process of positive adaptation in response to significant adversity or trauma (Luthar et al. 2000). A major source of adversity in childhood and throughout adulthood is socio-economic disadvantage. This is associated with a number of co-factors, such as poor living conditions, overcrowding, and lack of material resources (Brooks-Gunn and Duncan 1997).

The experience of disadvantage early in life may weaken resilience, although this is not necessarily so (Feinstein and Peck 2008). Protective factors fall into three broad categories: attributes of children; characteristics of their families; and aspects of the wider social context (Garmezy 1985; Rutter 1987).

Resilience is thus associated with personality characteristics like self-worth and efficacy, but is also influenced by external factors, such as having a supportive family and other sources of external support. Howard et al. (1999) reviewed theoretical and empirical literature relating to the development of resilience amongst children. The authors focused on personal attributes, concluding that the following "internal attributes" characterize the resilient child: autonomy, problem-solving skills, a sense of purpose and

Focus: Learning and identity

future, and social competence. It is plausible, though not proven, that learning–among adults as well as children–has an impact on each of these "internal attributes".

2. Self-concepts and learning

2.1 Schooling

Self-concepts develop while children are young, and school plays an important role, providing children with feedback about their competencies in academic, psychological and social areas. Among very young children, self-concept is consistently high, but with increasing life experience children learn their relative strengths and weaknesses. In general, their level of self-concept declines, becomes more differentiated with age and becomes more highly correlated with external indicators of competence, such as skills, accomplishments, and the opinions of significant others (Marsh 1985; Marsh 1990; Shavelson and Marsh 1986).

This can have serious and long-lasting consequences. If an individual believes that ability is fixed and innate and receives repeated signals about their low ability in school, or meets with lack of success in learning, negative self-concepts become harder to change, presenting a barrier to subsequent participation in learning. Adults with previous negative or unpleasant experiences of learning are not likely to engage in learning unless they believe that they are able to learn. For these adults, their learning experiences in adulthood are also about 'unlearning', that is, learning that redresses or changes individuals' perceptions towards learning (Sabates, Feinstein and Vorhaus 2007).

Positive self-concepts, self-esteem and motivation are more likely to be benefits of learning for children and young people when certain factors are in place: high expectations from teachers, a classroom environment where students have autonomy; and a curriculum that is seen as relevant. These aspects and others are discussed in more detail in the subsections below.

Transitions

Points of school transition seem to be particularly significant for the development of self concepts: students entering junior high school, for example, face more in the way of whole class task organization and between-classroom ability grouping (Eccles and Midgley, 1989; Oakes et al. 1992). This is likely to increase social comparison and competitiveness (Eccles et al. 1984; Rosenholtz and Simpson 1984), whilst the use of grading and public assessment can have a negative effect on early adolescents' self-perceptions and motivation.

If grades decline at school transition, self-perceptions and motivation are also likely to decline; the size of the drop in grades on transition can predict early school leaving (Simmons and Blyth 1987). US evidence on early adolescence points to declines in achievement and motivation (Eccles and Midgley 1989; Eccles et al. 1993; Maehr and Midgley 1996), often coinciding with the transition into middle school or junior high school. Other evidence also points to declines in intrinsic motivation (Harter 1981), interest in school (Epstein and McPartland 1976) and self-concepts (Wigfield et al. 1991).

There are also increases in test anxiety (Wigfield and Eccles 1989) and both truancy and school drop-out (Rosenbaum 1976). Eccles and Midgley (1989) suggest that junior high schools typically lack educational environments that are

developmentally appropriate for young adolescents, and argue that changes in school environment are indeed often harmful for this group. They claim that such changes, alongside normal individual development, are likely to result in a developmental mismatch—i.e. a poor 'fit' between the young person and the classroom environment. This can increase the risk of negative motivational outcomes, especially for young people who struggle academically.

Teaching practices

Researchers observe a combination of increasing maturity of high school students and greater teacher emphasis on control and discipline, providing fewer opportunities for student decision-making as compared with elementary school teachers (e.g. Brophy and Everston 1978; Midgley and Feldlaufer 1987; Moos 1979). The evidence confirms what stage-environment fit theory suggests: the discrepancy between the wish for autonomy and control, and the actual opportunities for students in the classroom, leads to a decline in motivation and interest in school (Mac Iver and Reuman 1988). However, self concepts tend to be higher among students when teachers take a trusting, caring and respectful approach (Goodenow 1993; Roeser and Eccles 1998; Roeser et al. 1996).

Classroom practices can be distinguished by the priority given either to task mastery or to performance goals. Teachers and learners in US research testify that, as adolescents move from elementary to middle school, the school environment is increasingly focused on performance—competition, relative ability and social comparison (Midgely et al. 1995). How far teachers are task-focused at both levels predicts students' and teachers' sense of personal efficacy, this being lower among middle school participants than among elementary school participants.

Anderman et al. (1999) compared two groups of young adolescents: the first moved into a middle school emphasizing task focused instructional practices, the second into a middle school emphasizing performance focused instructional practices. The two groups of students were found to differ in their motivational goals following the transition, although these had not differed beforehand; the adolescents moving into the first school being less likely to show an increase in extrinsic motivational and performance oriented motivational goals.

Classroom management

Research on classroom management gives evidence of the effects of orderliness and predictability. Student achievement and conduct improves when teachers provide feedback, and establish smoothly run and efficient procedures for monitoring student progress and work completion (Blumenfeld et al. 1983; Eccles et al. 1998; Pintrich and Schunk, 1996).

Boggiano, Deci and Ryan suggest that overly controlling, autonomy inhibiting environments undermine intrinsic motivation, ability self-concepts and self-direction and, instead, encourage a learned helpless response to difficult tasks. Laboratory and field based studies provide support for this view (Boggiano et al. 1992; Deci et al. 1981; Grolnick and Ryan 1987).

While direct instruction has a positive impact on student achievement, research also suggest that students exhibit more stress in didactic as compared with student centered contexts (Dunn and Kontos 1997). More open classroom contexts encourage students to be more creative, hold better self-concepts and more positive attitudes toward teachers and school, and to demonstrate greater independence and curiosity (Dunn and Kontos 1997; Peterson 1979).

Focus: Learning and identity

Grouping of students

The way in which children are grouped in school is also associated with the development of motivation and self-perceptions. Mixed age learning among children seems to have benefits for self-concept (Pratt 1986; Way 1981) and prosocial behavior (Allen 1989; McClellan and Kinsey 1997). As regards gender grouping, girls have better socio-emotional outcomes when taught in single-sex groups, outcomes for boys are less well understood.

The argument in favor of ability grouping includes the point that students are more likely to learn when material is well matched to their competence. When grouped by ability, high-ability students tend to have positive socio-emotional outcomes, but low ability students have negative outcomes (Fuligni et al. 2001; Gamoran and Mare 1989; Kulik and Kulik 1987).

The evidence is consistent for children in high ability classrooms and high within-class ability groups (Dreeban and Barr 1988; Fuligni et al. 2001; Pallas et al. 1994). Shields (1996) found that, compared with heterogeneously grouped gifted students, homogeneously grouped gifted students showed higher self-concepts, self-acceptance, and independence. Indeed, Feldhusen and Moon (1992) argue that heterogeneous grouping for gifted students leads to lower motivation and poorer attitudes toward school.

On the other hand, Eder and Felmlee (1983, 1984) explored attention patterns in low and high ability first grade reading groups. They controlled for individual characteristics that included personal attention patterns, and found that students in low ability groups became inattentive at four times the rate of students in high ability groups. The authors observed that teachers of high ability groups quickly managed inattentiveness or disruption whereas teachers of low ability groups tended to ignore this. Peer effects were observed: high ability groups applied pressure to maintain attention during interruptions, whilst low ability groups tended to use interruptions as an opportunity to distract attention from the current task.

Schwartz (1981) observed behavior in low ability classes amongst elementary and junior high school students, and found it characterized by challenges to teacher authority, obstruction of academic activities, and misuse of educational resources. These findings indicate that social influences in low ability groups may overwhelm any instructional advantages to grouping (Wilczenski 1993).

Lou et al.'s (1996) meta-analysis of studies of within-class grouping found small but positive effects of placing students in groups: they were more positively disposed towards school and had higher self-concepts than students in ungrouped classes. However, the same studies show, as above, negative socio-emotional effects of grouping low ability students together, in part owing to the low expectations of teachers and the absence of positive role models. Being placed in between-class low academic groups is also associated with poor attitudes towards school, feelings of incompetence, and problem behaviors (Oakes et al. 1992), effects often accounted for by inferior educational experience (Dreeban and Barr 1988; Pallas et al. 1994; Vanfossen et al. 1987).

Overall, the evidence suggests that in an equitable society, students should be educated in heterogeneous ability groupings, particularly in the light of evidence about their ability to help one another. Peer collaboration in learning is thought to foster socio-emotional development (Slavin 1980; Sharan 1980), including better attitudes toward learning, better self-concepts, better

attitudes toward others, and better racial relationships (Bossert 1988–1989; Slavin 1990). Peer tutoring programs are associated with socio-emotional gains: tutees are described as more cooperative and respectful towards peers and teachers, while also exhibiting higher self-esteem (Gensemer 2000; Phillips et al. 1994; Roswal et al. 1995).

Teacher expectations

Teachers who believe they can reach the most difficult students communicate positive expectations, and students' confidence in their ability to master academic material is thereby enhanced (Ashton 1985; Midgley et al. 1989). When teachers have a low sense of their own effectiveness, this can lead to students exhibiting helpless responses to failure in the classroom, and to the development of depressive symptoms (Cole 1991; Roeser et al. 1999).

Teachers often have varying expectations of students in any one class. Rosenthal et al. (1969) argues that teacher-expectancy effects depend on whether teachers structure activities differently, and interact differently, with high and low expectancy students, and on whether these differences are perceived by the students (Brophy 1985; Weinstein 1989). One focus of research is differential treatment in respect of gender, ethnicity and social class. Studies report small but consistent undermining effects of low teacher expectations on girls (mathematics and science), minority groups (all subject areas) and on children from low social class backgrounds (all subject areas) (Eccles and Roeser 2003; Brophy and Good 1974; Ferguson 1998; Jussim et al. 1996; Valencia 1991).

Social climate

The academic focus of a school can affect identity concepts and even mental health. A series of US studies found that a belief that school is ability-focused can lead to a decline in students' self esteem, and an increase in anger, depressive symptoms, and school truancy when moving from seventh to eighth grade (Roeser and Eccles 1998; Roeser et al. 1998). An emphasis on ability can alienate many of those students unable to perform at the highest levels, leading to anxiety, anger and disenchantment (Eccles and Midgley 1989; Finn 1989). Schools emphasizing effort, improvement, and the expectation that all students can learn, appear to include more adolescents in the learning process, whilst also reducing depression and the anxiety that achievement settings can give rise to (Eccles and Roeser 2003).

Fiqueira-McDonough (1986) compared two high schools that were similar in respect of intake and achievement rates but different in respect of academic orientation and rates of delinquent behavior. The school putting more emphasis on competition and high grades had higher delinquency rates, and delinquent behavior was predicted by low grades. For the school with more diverse goals, taking a greater interest in students' non-academic needs, school attachment was greater on average. Delinquent behavior was associated with low levels of attachment, but the emphasis on motivation and diversity may have promoted an attachment to school, thereby discouraging delinquency.

For further discussion of how schools can foster social capital, see the section 'Learning and social capital' in the paper 'Learning and Community Vitality', part of the series WBL.

Focus: Learning and identity

The curriculum

The significance of providing learning materials that are meaningful to students is borne out by the association between low interest in and perceived irrelevance of the school curriculum on the one hand, and poor attention, disengagement and alienation from school on the other (Jackson and Davis 2000; Finn 1989; Larson and Richards 1989). Curricula that fail to represent the voices and experience of traditionally under-represented groups can also explain the alienation of some group members from the educational process (Fine 1991; Sheets and Hollins 1999).

Many school programs aim to improve outcomes by supporting students' self image and self-esteem. But Wilczenski et al. (2001) argue that enhancing social and emotional outcomes requires a focus on mastery in the classroom rather than student self-perceptions. Socio-emotional learning cannot be separated from the instructional mission of schools, since social and emotional adjustment mediates academic competence and resilience.

2.2 Mentoring and youth work

Fortunately, there are steps that can be taken to help address disengagement from learning, particularly through informal learning. Mentoring and motivational programs for disadvantaged teenagers, for example, have been associated with improved motivation and non-cognitive skills (Karoly et al. 1998; Blau and Currie 2004; Heckman 2000).

Studies in the US of the Big Brothers/Big Sisters (BB/BS) and Philadelphia Futures Sponsor-A-Scholar programs showed positive social effects on school-aged children and adolescents. BB/BS paired unrelated adult volunteers with young people from single-parent households. Tierney and Grossman (1995) found that eighteen months after being matched with a mentor, the young people (aged 10–16 at the time of the match) were less likely to have used drugs or alcohol, to truant from school, or to lie to their parents; they were more likely to feel competent in their school work and to report a better relationship with parents (Cunha et al. 2005).

Youth work—another kind of informal education—has been described as a way of engaging young people in 'sense making' as a 'process of continuous self discovery and re-creation' (Young 1999, p.120). The aim is to "help the young acquire the social skills of co-operation, of membership, of contribution to common effort, of sociability" (Davies and Gibson 1967).

This process of social education entails young people becoming engaged in relationships where genuine dialogue can take place. Young people have consistently testified to the ability of youth workers to establish relationships of trust and mutual respect which they have found lacking in their relationships with other adults in their lives (Merton 2004). McNeil and Dixon (2005) note that developing quality relationships based on respect is essential to relationships sustaining engagement with young adult learners. Many young adults will fall back into the 'child' or 'pupil' role by default, so it is important to breakdown the child/adult opposing relationship. Mutual respect should be based on responsibility, and effective compromise within the boundaries.

The significant factor in helping to develop social skills through youth work is therefore thought to be not so much participation in an activity itself, as the development of relationships through the activity. For this reason, this section should be read in conjunction with the section on 'Social capital and social networks' in 'Learning and Community Vitality', coming soon.

Outcomes that young people and workers attribute to youth work include increased confidence, a greater ability to make decisions for themselves, learning new skills and feeling more able to ask for help and information when needed, as well as reengaging with education and reduced drug use (Merton 2004; Crimmens et al. 2004).

As regards confidence, there is evidence that this is also built as part of the relationships young people form with youth workers. A further factor is youth work's capacity to enable young people to make their own choices and to find their own solutions to problems, rather than acting simply to provide information or ready-made solutions. Youth work engages young people in influencing and taking decisions in projects, clubs and centers. These 'growth spurts' in confidence are a source of the motivation, achievement and the recognition that ensues. This in itself reinforces the confidence and completes the 'virtuous circle' of achievement.

Merton (2004) sought to identify and explain the impact of youth work provided by local youth services in England. The main focus of this study was on the impact the work had on individual young people, but it also addressed the impact of youth work on communities and other services for young people. Seventy-two percent of young people reported that they felt quite a lot or very much more confident as a result of their engagement with youth work.

Overall, two thirds of respondents in the study reported that youth work had made a considerable difference to their lives, including (as well as increased confidence) making new friends, learning new skills, making decisions for themselves and thinking about the consequences, having a say in what

goes on, and feeling more able to ask for help and information when needed. More than two out of five said they thought their prospects of finding a job had also been improved through their engagement in youth work activities.

The proportion of young people reporting increased confidence was even higher (87 percent) among a total of 909 young people surveyed as part of research undertaken by the National Foundation for Educational Research (NFER) (Golden and Spielhofer, 2004). This growth in confidence spurred several of the young people to develop new skills and gain some form of certification for their achievements.

These gains are examples of progress by individuals in a range of self concepts and 'soft' skills—including, for example, interpersonal skills, positive attitudes, the ability to organize oneself (for example, one's time and money) and solve problems, and generic skills required for the world of work, such as reliability, initiative and the ability to build relationships. These personal and social development outcomes can, in turn, lead to the achievement of 'hard' outcomes—for example, staying on at school, reducing anti-social or offending behavior, getting a job, and making purposeful use of public facilities and services.

There are, of course, difficulties in the way of attributing these 'consequential changes' to youth work interventions alone, because of the many other factors at work. However, the research includes examples in which, as a consequence of youth work, young people were reported to have: made use of information, advice and counseling either face-to-face or on-line; given up or seriously reduced using drugs; and enrolled themselves on a college course or a training program. Many had been helped to settle better at school or keep out of trouble with the law.

Focus: Learning and identity

These findings are endorsed by Golden and Nelson's (2004) evidence, which reported on the destinations of more than 38,500 young people who took part in projects funded by the UK Government's Neighbourhood Support Fund over a three-year period. Two-thirds of these proceeded to positive destinations in education, employment or training. Of those who achieved this, two out of every three were in the same destination six months later. Of the remainder, 75 per cent switched to another destination and 10 per cent dropped out altogether.

The findings are also corroborated by a small longitudinal study of the one-week Fairbridge foundation course conducted by the Charities Evaluation Service (Astbury and Knight, 2003), showing how young people have achieved greater confidence and interpersonal skills through youth work. The findings showed that: immediately following the course, personal and social skills increased dramatically and that this proved a reasonably reliable predictor of behavioral improvements—two out of three went on to return to education, training or employment, resolve housing problems and maintain positive attitudes towards themselves and other people. However, the research also highlighted the ways in which some positive short term changes could be lost over time.

2.3 Benefits of more education and higher qualifications

The relationship between self-concepts and learning appears to be mutually reinforcing. For example, adults with higher levels of education tend to enjoy relatively high levels of self-efficacy; both critical thinking skills and social skills have also been found to be strongly and positively associated with the amount of schooling an individual has received (Cascio and Lewis 2006; Soskice 1993; Heckman 2006; Glaeser 2005). Correlations have

been found between total years of education undertaken and self-efficacy, self-esteem, optimism and happiness, amongst residents of the US aged 70–79 (Kubzansky et al. 1998) and pregnant women living in California (Rini et al. 1999).

Having more years of education and higher levels of qualifications is also associated with a greater sense of connection with others and forming supportive relationships. There is evidence in the case of young people (Stevens et al. 2007) that the extent of their social networks and relationships in turn influences their socio-psychological resources, such as self-concept of ability; as we have seen, these concepts are positively related to educational achievement.

Preferences

Teenage parenthood and criminal activity (as well as unhealthy lifestyles) are risky behaviors often considered to be driven by "affective" thinking (a focus on immediate feelings) rather than "cognitive" thinking (a focus on long term benefits and costs). Studies have investigated these differences by asking respondents whether they agree with statements such as, "Nowadays, a person has to live pretty much for today and let tomorrow take care of itself". There is a distinct declining relationship with schooling, which may change people's preferences by providing information about new opportunities or by developing patience.

More than half of high school dropouts agreed with the above statement, while less than 30 percent of college graduates did so (Oreopoulous and Salvanes 2009). Conditioning on reporting the same family income bracket in the same survey year reduced the gradient of this relationship, but not by much. Several other studies find that that teenage parenthood and criminal activity

negatively correlate with years of completed schooling (e.g. Black et al. 2008; Lochner and Moretti 2004; Lee and McCrary 2005).

2.4 Adult learning

Confidence and related self-concepts

As in the case of young people, adults report increases in confidence associated with learning. Schuller et al. (2002), for example, carried out 140 semi-structured interviews with adult learners in a range of programs in the UK, and found that the positive effect of learning on learner's confidence seemed in turn to result in higher personal and collective rewards in terms of human, social and identity capital, as participants reported gaining confidence to take on more active social roles, to try out new things, and to tackle issues rather than ignore them. Some progressed to take additional courses and apply for jobs, as well as to visit places that they would not otherwise have visited, such as art galleries, museums and libraries, and to travel abroad. Informal adult learning, in particular, was associated with social benefits: for example, adults reported undertaking more active social roles than previously.

Similar to young people, for participants in this study to develop positive psychosocial qualities, it was important that the content of the learning was meaningful to the learner, as well as that the level of challenge and support was appropriate for them and that they were ready to be engaged with the learning experience.

Respondents of both genders, all ages, every ethnic background interviewed, every occupational class, all levels of previous education, and living in families or households of every kind mentioned that they had experienced increased self-esteem (although not always using this term) as an outcome of learning at some point during their life. Almost as many respondents mentioned such outcomes as self-understanding, doing something for oneself, and purpose and hope. Other reported benefits were a clearer sense of identity, the capacity to think independently, improved competences and communication and better social integration.

Similarly, participants in learning for adults aged 50–71 living in England and Wales reported that learning had led to increases in their self-confidence, their enjoyment and satisfaction with life, how they felt about themselves and their ability to cope with everyday life (Dench and Regan 2000). A study of basic adult education students reported a marked growth in average levels of personal confidence across a range of contexts (Tett and Maclachlan 2007). However, while the variations in the latter study were statistically significant, they were also relatively small; and without a matched control group of people not taking similar courses, it is difficult to ascertain causality.

Focus: Learning and identity

Longitudinal research (Feinstein and Hammond 2004; Hammond and Feinstein 2006) has also found an association between taking adult learning courses between the ages of 33 and 42 and improvements in optimism, as well as transformations from low to good levels of self-efficacy, controlling for family, social and educational background, and current life circumstances. The association was greater for those who had low levels of achievement at school. However, the authors caution that reverse causation is possible in the relationship between education and self-efficacy.

In terms of more specific kinds of learning, further education courses in the social sciences, taught through discussion with students from diverse backgrounds, were found to promote self-understanding and independent thinking, sometimes contributing to changed hopes and aspirations (Preston and Hammond 2003). Wertheimer (1997) reviewed studies of community-based adult education courses for mental health service users, and conducted a survey of the experiences of participants. She found improvements in confidence, self-esteem, self-efficacy and mental health. More recent qualitative studies also indicate positive outcomes for mental health service users from participating in education (e.g. Westwood 2003).

Evaluations of educational initiatives also provide evidence of improved self-esteem, self-efficacy and self-understanding. These include evaluations of courses in higher education (HE) in England taken by mature women (Cox and Pascall 1994), adults participating in HE and Access to HE courses in England (West 1996), adults in England who were returning to education (Hull 1998), older adults receiving mentoring support on a psychosocial support programme in the US (Koberg et al. 1998), and courses offered at various levels to adults with

chronic health problems and/or employment difficulties living in England (McGivney 1997).

Resilience

Place et al. (2002) suggest that having high levels of activity is a factor that contributes to resilience. This may be an outcome of adult learning, since participation in adult learning is associated with adults taking increased levels of exercise and higher levels of civic participation (Feinstein and Hammond 2004: see paper 'Learning and Community Vitality'). In a survey of over 10,000 managers and lecturers working in further education in England, respondents suggested that further education helped students to develop both resilience and confidence. Moreover, practitioners involved in support services were likely to cite efficacy and improved mental health as benefits from their programs, and to report that that their students experienced increased resilience (Preston and Hammond 2003).

Dealing effectively with adversity and stressful conditions brings benefits for physical and mental health. Reliance upon nicotine, alcohol and other addictive substances, as well as certain patterns of eating, are common responses to adversity and stressful conditions (Allison et al. 1999). Individuals who through education are more resilient may therefore be inclined to respond in other ways, less damaging to their physical health and possibly more effective in reducing levels of experienced stress in the longer term. Individuals who are more resilient, almost by definition, experience lower levels of chronic stress in response to a given stressor or life event. This not only affects health behaviors, but also affects physical health, because chronic stress exacts a cost that can both promote the onset of illness and its progression (see Wilkinson 1996 for fuller discussions).

Success in school also seems to be a factor in later outcomes, which might be related to the development of resilience. Schoon et al. (2004), using data from the 1958 British cohort, found that among socially disadvantaged cohort members, academic attainment at age 16 predicted both adult work success and health at age 33.

In general, conclusions concerning the relationship between resilience and learning are very tentative; the nature of the effect is not a simple impact of years of schooling or qualifications achieved. Most studies try only to identify risk factors, rather than investigating causation and the extent of effects. As with the evidence on other self-concepts presented above, evidence in this area suggests that it is features of the educational experience that may be important in the formation or destruction of personal resilience.

Learning in the workplace

Outcomes such as improved decision-making, problem-solving, team-working and communication skills have been associated with informal learning in the workplace. For example, Fuller and Ashton (2003) cite case studies from the International Labour Office (ILO) which suggest that informal learning plays an important role in facilitating the effective use of high performance practices, such as self-managed work teams, team-working, continuous improvement and Total Quality Management (see also Ashton and Sung 2002).

The hypothesis is that skills such as decision-making, problem-solving and communication are acquired through informal learning in the workplace. This was one of the findings in the only detailed case studies that directly addressed this question of the relationship between informal learning and productivity, namely those undertaken by Koike in Japan and East Asia (Koike and Inoki 1990; Koike 2002).

Using matched plants in Japan, Malaysia and Thailand, Koike and Inoki (1990) found that the use of group working, devolved employee decision making and extensive learning produced much higher levels of intellectual skills among employees in the Japanese plants. This meant that they were able to identify and rectify potential faults before they disrupted the production process. These employees had much higher levels of skill both in terms of the breadth and the depth of their knowledge of the organization and its production processes, most of which was acquired through informal learning. The result was productivity levels three times higher in the Japanese plants than in the others (compare Fuller and Ashton 2003).

Garman et al. (1999) and Kratzer et al. (1998) studied work-based financial education. A post-participation postal survey was conducted with employees who took part in a financial education program offered by a chemical production company. This sought information on financial wellbeing, financial behavior and attitudes. Compared with non-participants, workshop participants reported: greater levels of satisfaction with their present financial situation; higher satisfaction with personal savings and savings for retirement; better health; and positive performance ratings from their financial stress.

Other case studies of learning in organisations suggest that, where companies have established effective learning cultures, this has involved a great deal of informal (incidental) learning (Figgis et al. 2001; Dawe 2003).

2.5 Potential negative effects of learning

Participation in learning has also been found to involve risk (Schuller 2004; Schuller et al. 2002, 2004) since an individual undertaking learning must be willing to admit a degree of ignorance, adopt new perspectives and try out new skills. Schuller et al. found that it was possible for lack of success in learning to undermine self-esteem and aspirations. An example is research by Randle (2003), who found that among students on a diploma course in nursing, global self-esteem decreased dramatically over the three years of the course, with students reporting that they felt increasingly powerless to be the sort of nurse they wished to be.

3. Wider implications

While mainly related to outcomes at the individual level, the area of identity is also connected with national-level factors. Equality on a national level will influence attitudes and behaviors at the individual level (Wilkinson 1997). Relative income matters because relativities in income influence people's sense of who they are in the social hierarchy. In turn this can contribute to health inequalities through stress and low wellbeing (Marmot et al. 1991), as well as to crime (Merton 1988), anti-social behavior, disengagement from learning and social exclusion. Thus identity beliefs at the individual level are a key channel for effects of inequality.

Positive self-concepts have been linked with the promotion of health-related behaviors in particular, in terms of helping individuals to manage chronic health conditions, as well as protecting mental health (Schuller et al. 2002; Hammond 2002). This could also have implications for health at a national level. It is the relationship between learning and health to that we turn in part 2 of the study.

Information about the project "European Lifelong Learning Indicators" (ELLI)

It is important to remember that this study is just one part of the larger European Lifelong Learning Indicators (ELLI) project. The ELLI project was launched by the Bertelsmann Stiftung in January 2008 in an effort to make the concept of lifelong learning more understandable and transparent. It is meant as a resource for political decision makers – from the European to the community level – as well as educational institutions, private industry, academics and journalists. In addition, it assists individuals in Europe who want to know more about learning in their own community, country and the rest of Europe, i.e., what learning entails and the impact it has. The ELLI project is breaking new ground by expanding its focus to include not only the formal educational system, but also learning that takes place outside of traditional educational institutions. This holistic approach is an essential component of the project, and is reflected in all of its instruments and activities.

For an overview of all activities please visit our webpage

www.elli.org

References

Allen, J. P. Social impact of age mixing and age segregation in school: A context-sensitive investigation. Journal of Educational Psychology (81): 408–416, 1989.

Allison, K. R., E. M., Adlaf, A. Ialomiteanu, and J. Rehm. Predictors of health risk behaviours among young adults: analysis of the national population health survey. Canadian Journal of Public Health (90) 2: 85–89, 1999.

Anderman, E. M., M. L. Maehr., and C. Midgley. Declining motivation after the transition to middle school: Schools can make a difference. Journal of Research and Development in Education (32): 131–147, 1999.

Ashton, P.T. Motivation and the teacher's sense of efficacy. In Research on motivation in education; Vol. 2. The classroom milieu, edited by C. Ames and R. Ames. Orlando, Fla.: Academic Press, 141–171, 1985.

Ashton, D. N., and J. Sung. Supporting Workplace Learning for High Performance Working. Geneva: International Labour Organization, 2002.

Astbury, R., and B. Knight. Fairbridge Research Project Final Report. London: Charities Evaluation Services, 2003.

Bandura, A. Self-efficacy: The exercise of control. New York: W. H. Freeman, 1994.

Black, S. E., P. J. Devereux, and K. Salvanes. Too Young to Leave the Nest: The Effects of School Starting Age. Discussion Paper No. 3452. Bonn: Institute for the Study of Labor, 2008.

Blau, D. M., and J. Currie. Preschool, day care, and afterschool care: Who's minding the kids? Working Paper 10670. Cambridge, Mass.: National Bureau of Economic Research, 2004.

Blumenfeld, P., V. L. Hamilton, S. Bossert, K. Wessels, and C. Meece. Teacher talk and student thought: Socialization into the student role. In Teacher and student perceptions: Implications for learning, edited by J. Levine and U. Wang. Hillsdale, N.J..: Lawrence Erlbaum Associates, 1983.

Boggiano, A. K., A. Shields, M. Barrett., T. Kellam, E. Thompson, J. Simons, and P. Katz. Helplessness deficits in students: The role of motivational orientation. Motivation and Emotion (16): 271–296, 1992.

Bossert, S. T. Chapter 6: Cooperative Activities in the Classroom. Review of Research in Education (15) 1: 225–250, 1988–1989.

Brooks-Gunn, J., and G. J. Duncan. The Effects of Poverty on Children. The Future of Children (7) 2: 55–71, 1997.

Brophy, J. E. Teachers' expectations, motives, and goals for working with problem students. In Research on motivation in education, Volume 2: The classroom milieu, edited by C. Ames and R. Ames. New York: Academic Press, 175–213, 1985.

Brophy, J. E., and C. M. Evertson. Context variables in teaching. Educational Psychologist (12): 310–316, 1978.

Brophy, J. E., and J. L. Good. Teacher-student relationships. New York: Holt, Rinehart and Winston, 1974.

Cascio, E. U., and E. G. Lewis. Schooling and the Armed Forces Qualifying Test: Evidence from School-Entry Laws. Journal of Human Resources (XLI) 2: 294–318, 2006.

Cole, D.A. „Preliminary Support for a Competency-Based Model of Depression in Children." Journal of Abnormal Psychology. (100) 2: 181–90, 1991.

Cox, R., and G. Pascall. Individualism, Self-Evaluation and Self-Fulfilment in the Experience of Mature Women Students. International Journal of Lifelong Education (13) 2: 159–73, 1994.

Crimmens, D., Factor, F., Jeffs, T., Pitts, J., Pugh, C., Spence, J., and Turner, P. Reaching Socially Excluded Young People: A National Study of Street-Based Youth Work. Leicester: National Youth Agency, 2004.

Cunha, F., Heckman, J. J., Lochner, L., and D. V. Masterov. Interpreting the evidence on life cycle skill formation. Working Paper 11331. Cambridge, Mass.: National Bureau of Economic Research, 2005.

Davies, B., and A. Gibson. The Social Education of the Adolescent. London: University of London Press, 1967.

Dawe, S. Determinants of successful training practices in large Australian firms. Adelaide, Australia: National Centre for Vocational Education Research, 2003.

Deci, E. L., Schwartz, A. J., Sheinman, L., and Ryan, R. M. An instrument to assess adults' orientations toward control versus autonomy with children: Reflections on intrinsic motivation and perceived competence. Journal of Educational Psychology (73): 642–650, 1981.

Dench, S., and J. Regan. Learning in Later Life: Motivation and Impact. London: Department for Education and Employment, 2000.

Dreeben, R., and R. Barr. Classroom Composition and the Design of Instruction. Sociology of Education (61): 129–42, 1988.

Dunn, L., and S. Kontos. Developmentally appropriate practice: What does research tell us? ERIC Document Reproduction Service No. ED413106. Champaign, Ill.: ERIC Clearinghouse on Elementary and Early Childhood Education, 1997.

Eccles, J. S., and C. Midgley. Stage-environment fit: Developmentally appropriate classrooms for young adolescents. In Research on motivation in education: Goals and cognitions, Vol. 3, edited by C. Ames and R. Ames. New York: Academic Press, 13–44, 1989.

Eccles, J. S., C. Midgley, and T. Adler. Grade-related changes in the school environment: Effects on achievement motivation. In The development of achievement motivation, edited by J. G. Nicholls. Greenwich, Conn.: JAI Press, 283–331, 1984.

References

Eccles, J. S., C. Midgley, A. Wigfield, C. M. Buchanan, D. Reuman, C. Flanagan, and D. Mac Iver. Development during adolescence: The impact of stage-environment fit on adolescents' experiences in schools and families. American Psychologist, (48): 90–101, 1993.

Eccles, J. S., D. Rodriguez, and A. Wigfield. The Development of Children's Motivation in School Contexts. Review of Research in Education, 23, 73–118, 1998.

Eccles, J.S., and R.W. Roeser. Schools as developmental contexts. In: Blackwell Handbook of Adolescence, edited by G. Adams and M.D. Berzonsky Malden, MA: Blackwell Publishing, 129–148, 2003.

Eccles, J. S., and A. Wigfield. Motivation to succeed. New York: Wiley, 1997.

Eder, D., and D. Felmlee. Contextual Effects in the Classroom: the Impact of Ability Groups on Student Attention. Sociology of Education. (56) 2: 77–87, 1983.

Eder, D., and D. Felmlee. The development of attention norms in ability groups. In The social context of instruction, edited by P. L. Peterson, L. C. Wilkinson, and M. Hallinan. New York: Academic Press, 189–207, 1984.

Epstein, J. L., and McPartland, J. M. The concept and measurement of the quality of school life. American Educational Research Journal (13): 15–30, 1976.

Feinstein, L., and C. Hammond. The Contribution of Adult Learning to Health and Social Capital. Oxford Review of Education, (30) 2: 199–221, 2004.

Feinstein, L., and S. C. Peck. Unexpected Pathways Through Education: Why Do Some Students Not Succeed in School and What Helps Others Beat the Odds? Journal of Social Issues (64): 1–20, 2008.

Feldhusen, J. F., and S. M. Moon. Grouping gifted students: Issues and concerns. Gifted Child Quarterly (36): 63–67, 1992.

Ferguson, R. Can schools narrow the black-white test score gap? In The black-white test score gap, edited by C. Jencks and M. Phillips. Washington, DC: Brookings Institution Press, 1998.

Figgis, J., A. Alderson, A. Butarac, K. Mitchell, and A. Zubrick. What convinces enterprises to value training and learning and what does not? Leabrook, Australia: National Centre for Vocational Education Research, 2001.

Fine, M. Framing dropouts: Notes on the politics of an urban public high school. Albany, N.Y.: State University of New York Press, 1991.

Finn, J. D. Withdrawing From School. Review of Educational Research (59) 2: 117–142, 1989.

Fiqueira-McDonough, J. School context, gender, and delinquency. Journal of Youth and Adolescence (15): 79–98, 1986.

Fuligni, A. J., J. S. Eccles, and B. L. Barber. Early adolescent peer orientation and adjustment during high school. Developmental Psychology (37) 1: 28–36, 2001.

Fuller, A., and D. Ashton. The impact of informal learning at work on business productivity. London: Department of Trade and Industry, 2003.

Gamoran, A., and Mare, R. D. Secondary school tracking and educational inequality: Compensation, reinforcement, or neutrality? American Journal of Sociology (94): 1146–1183, 1989.

Garman, E. T., and C. Y. Kim. Workplace Financial Education Improves Personal Financial Wellness. Financial Counseling and Planning Journal (10) 1: 79–88, 1999.

Garmezy, N. Stress resistant children: The search for protective factors. In Recent research in developmental psychopathology. Journal of Child Psychology and Psychiatry, edited by J.E. Stevenson. (4): 213-233, Oxford: Pergamon Press, 1985.

Gensemer, P. Effectiveness of cross-age and peer mentoring programs. ERIC Document Reproduction Service No. ED438267, 2000. Available www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/16/0e/3f.pdf (Accessed 23.03.2010).

Glaeser, E. L. Review of Richard Florida's The Rise of the Creative Class. Regional Science and Urban Economics (35) 5: 593–596, 2005.

Golden, S., and J. Nelson. Evaluation of Increased Flexibilities for 14–16 Year Olds: Profile of partnerships and students 2002 and 2003. London: Department for Education and Skills, 2004.

Golden, S., and T. Spielhofer. Supporting the Hardest-to-Help Young. Slough, UK: NFER, 2004.

Goodenow, C. Classroom belonging among early adolescent students: Relationships to motivation and achievement. Journal of Early Adolescence (13) 1: 21–43, 1993.

Grolnick, W. S., and R. M. Ryan. Autonomy in Children's Learning: an Experimental and Individual Difference Investigation. Journal of Personality and Social Psychology. (52) 5: 890-8, 1987.

Hammond, C. Learning to be healthy. The Wider Benefits of Learning Papers. London: Institute of Education, Centre for Research on the Wider Benefits of Learning, 2002.

Hammond, C., and L. Feinstein. Are those who flourished at school healthier adults?: What role for adult education?. London: Centre for Research on the Wider Benefits of Learning, 2006.

Harter, S. A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. Developmental Psychology (17): 300–312, 1981.

Heckman, J. J. Policies to Foster Human Capital. Research in Economics (54) 1: 3–56, 2000.

Heckman, J. J. Skill Formation and the Economics of Investing in Disadvantaged Children. Science (312): 1900–1902, 2006.

Howard, S, and J. Dryden. Childhood Resilience: Review and Critique of Literature. Oxford Review of Education (25) 3: 307–323, 1999.

References

Hull, B. Education for Psychological Health. Adult Learning September: 15–17, 1998.

Jackson, A. W., and G. A. Davis. Turning points 2000: Educating adolescents in the 21st century. New York: Teachers College Press, 2000.

Jussim, L., J. Eccles, J., and S. Madon. Social Perception, Social Stereotypes, and Teacher Expectations: Accuracy and the Quest for the Powerful Self-Fulfilling Prophecy. Advances in Experimental Social Psychology, (28): 281, 1996.

Karoly, L. A., P. W. Greenwood, S. S. Everingham, J. Houbé, M. R Kilburn, C. P. Rydell, M. Sanders, and J. Chiesa. Investing In Our Children: What We Know And Don't Know About The Costs And Benefits Of Early Childhood Interventions. Santa Monica, Calif.: The RAND Corporation, 1998.

Koberg, C. S., R. W. Boss, and E. Goodman. Factors and Outcomes Associated with Mentoring among Health-Care Professionals. Journal of Vocational Behavior (53) 1: 58–72, 1998.

Koike, K. Intellectual Skills and Competitive Strength: is a radical change necessary? Journal of Education and Work (15): 391–408, 2002.

Koike, K., and T. Inoki. Skill Formation in Japan and Southeast Asia. Tokyo: University of Tokyo Press, 1990.

Kratzer, C. Y., B. H. Brunson, E. T. Garman, and J. Kim. Financial Education in the Workplace: Results of a Research Study. Journal of Compensation and Benefits (14) 3: 24, 1998.

Kubzansky, L. D., L. F. Berkman, T. A. Glass, and T. E. Seeman. Is Educational Attainment Associated with Shared Determinants of Health in the Elderly? Findings from the Macarthur Studies of Successful Aging. Psychosomatic Medicine (60) 5: 578–585, 1998.

Kulik, J. A., and C. L. Kulik. Effects of ability grouping on student achievement. Equity and Excellence (23): 22–30, 1987.

Larson, R., and M. Richards. The changing life space of early adolescence. Journal of Youth and Adolescence (18): 501–626, 1989.

Lee, D. S., and J. McCrary. Crime, Punishment, and Myopia. Working Paper No. 11491. Cambridge, Mass.: National Bureau of Economic Research, 2005.

Lochner, L., and E. Moretti. The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports. The American Economic Review (94) 1: 155–189, 2004.

Lou, Y., P. C. Abrami, J. C. Spence, C. Poulsen, B. Chambers, and S. d'Apollonia. Within-class grouping: A meta-analysis. Review of Educational Research (66): 423–458, 1996.

Luthar, S. S., D. Cichetti, D, and B. Becker. The construct of resilience: a critical evaluation and guidelines for future work. Child Development (71): 543–562, 2000.

Mac Iver, D., and D. A. Reuman. Decision-Making in the Classroom and Early Adolescents' Valuing of Mathematics. 1988.

Maehr, M. L., and C. Midgley. Transforming school cultures to enhance student motivation and learning. Boulder, Colo.: Westview Press, 1996.

Markus, H., and E. Wurf. The dynamic self-concept. Annual Review of Psychology (38): 299–337, 1987.

Marmot, M. G., G. D. Smith, S. Stansfeld, C. Patel, F. North, J. Head, I. White, E. Brunner, and A. Feeney. Health inequalities among British civil servants: the Whitehall II study. The Lancet (337): 1393–1397, 1991.

Marsh, H. W. Age and sex effects in multiple dimensions of preadolescent self-concept: A replication and extension. Australian Journal of Psychology (37) 2: 197–204, 1985.

Marsh, H. A multidimensional, hierarchical model of self-concept: Theoretical and empirical justification. Educational Psychology Review (2) 2: 77–172, 1990.

McClellan, D. E., and S. Kinsey. Children's social behavior in relationship to participation in mixed-age or same-sex classrooms. Paper presented at the biennial meeting of the Society for Research in Child Development, Washington, DC, 1997.

McGivney, V. Evaluation of the Gloucester Primary Health Care Project. Gloucester, UK: GLOSCAT, unpublished 1997.

McNeil, B., and L. Dixon. Success Factors in Informal Learning: Young adults' experiences of literacy, language and numeracy. London: Institute of Education, National Research and Development Centre for Adult Literacy and Numeracy, 2005.

Merton, R. Social Structure and Anomie, American Sociological Review (3): 672–682, 1988.

Merton, B. An Evaluation of the Impact of Youth Work in England. London: Department for Education and Skills, 2004.

Midgley, C., E. Anderman, and L. Hicks. Differences between elementary and middle school teachers and students: A goal theory approach. Journal of Early Adolescence (15): 90–113, 1995.

Midgley, C., and H. Feldlaufer. Students' and teachers' decision-making fit before and after the transition to junior high school. Journal of Early Adolescence (7): 225–241, 1987.

Midgley, C. M., H. Feldlaufer, and J. S. Eccles. Changes in teacher efficacy and student self- and task-related beliefs during the transition to junior high school. Journal of Educational Psychology (81): 247–258, 1989.

Moos, R. H. Evaluating educational environments. San Francisco, Calif.: Jossey-Bass, 1979.

Oakes, J., A. Gamoran, and R. N. Page. Curriculum differentiation: Opportunities, outcomes, and meanings. In Handbook of Research on Curriculum, edited by P. Jackson. New York: MacMillan, 570–608, 1992.

Oreopoulos, P., and K. G. Salvanes. How Large are Returns to Schooling? Hint: Money Isn't Everything. Working Paper No. 15339. Cambridge, Mass.: National Bureau of Economic Research, 2009.

References

Pallas, A. M., D. R Entwisle, K. L. Alexander, and M. F. Stluka. Ability-group effects: Instructional, social, or institutional? Sociology of Education (67): 27–46, 1994.

Peterson, P. L. Direct instruction reconsidered. In Research on teaching: Concepts, findings, and implications, edited by P. L. Peterson and H. J. Walberg. Berkeley, Calif.: McCutchan, 1979.

Phillips, N.B., L.S. Fuchs, and D. Fuchs. Effects of Classwide Curriculum-Based Measurement and Peer Tutoring: a Collaborative Researcher-Practitioner Interview Study. Journal of Learning Disabilities. (27): 7, 1994.

Pintrich, P. R., and D. H. Schunk, Motivation in education: Theory, research, and application. Englewood Cliffs, N.J.: Prentice Hall, 1996.

Place, M. Developing a Resilience Package for Vulnerable Children. Child and Adolescent Mental Health (7) 4: 162–167, 2002.

Pratt, D. On the merits of multi-age classrooms: Their work life. Research in Rural Education (3): 111–116, 1986.

Preston, J., and C. Hammond. Practitioner Views on the Wider Benefits of Further Education. Journal of Further and Higher Education (27) 2: 211–222, 2003.

Randle, J. Changes in Self-Esteem During a 3 Year Pre-Registration Diploma in Higher Education (Nursing) Programme. Learning in Health and Social Care (2) 1: 51–60, 2003.

Rini, C., C. Dunkel-Schetter, P. Wadhwa, C. A. Sandman. Psychological adaptation and birth outcomes: The role of personal resources, stress, and sociocultural context in pregnancy. Health Psychology, (18): 333-345, 1999.

Roeser, R. W., and J. S. Eccles, Adolescents' perceptions of middle school: Relation to longitudinal changes in academic and psychological adjustment. Journal of Research on Adolescence (88): 123–158, 1998.

Roeser, R. W., J. S. Eccles, and C. Freedman-Doan. Academic functioning and mental health in adolescence: Patterns, progressions, and routes from childhood. Journal of Adolescent Research (14): 135–174, 1999.

Roeser, R. W., J. S. Eccles, and J. Sameroff. Academic and emotional functioning in early adolescence. Longitudinal relations, patterns, and prediction by experience in middle school. Development and Psychopathology (10): 321–352, 1998.

Roeser, R. W., C. M. Midgley, and T. C. Urdan. Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: The mediating role of goals and belonging. Journal of Educational Psychology, 88: 408–422, 1996.

Rosenbaum, J. E. Making inequality: The hidden curriculum of high school tracking. New York: John Wiley and Sons, 1976.

Rosenholtz, S. J., and C. Simpson. The formation of ability conceptions: Developmental trend or social construction? Review of Educational Research (54): 301–325, 1984.

Rosenthal, R., and L. Jacobson. Pygmalion in the Classroom; Teacher Expectation and Pupils' Intellectual Development, 1969.

Roswal, G. M., A. A. Mims, M. D. Evans, B. Smith, M. Young, M. Burch, R. Croce, M. A. Horvat, and M. Block. Effects of collaborative peer tutoring on urban seventh graders. Journal of Educational Research (88): 275–279, 1995.

Rutter, M. Psychosocial resilience and protective mechanisms. Albany, N.Y.: American Orthopsychiatric Association, 1987.

Sabates, R., L. Feinstein, and J. Vorhaus. The Wider Benefits of Higher and Further Education: A Review of the Literature. Report commissioned by Scottish FE & HE Funding Council. London: Institute of Education, Centre for Research on the Wider Benefits of Learning, unpublished 2007.

Schoon, I., and J. Bynner. Risk and Resilience in the Life Course: Implications for Interventions and Social Policies. Journal of Youth Studies (6): 21–31, 2003.

Schoon, I., S. Parsons, and A. Sacker. Socioeconomic Adversity, Educational Resilience, and Subsequent Levels of Adult Adaptation. Journal of Adolescent Research (19) 4: 383-404, 2004.

Schuller, T. The Benefits of Learning: The Impacts of Formal and Informal Education on Social Capital, Health and Family Life. London: Routledge Falmer, 2004.

Schuller, T. Crime and Lifelong Learning. IFLL Thematic Paper 5. Leicester, UK: National Institute of Adult Continuing Education, 2009.

Schuller, T., A. Brassett-Grundy, A. Green, C. Hammond, and J. Preston. Learning, Continuity and Change in Adult Life. Wider Benefits of Learning Research Report No. 3. London: Institute of Education, Centre for Research on the Wider Benefits of Learning, 2002.

Schuller, T., J. Preston, C. Hammond, A. Brassett-Grundy, and J. Bynner. The benefits of learning: The impact of education on health, family life and social capital. London: Routledge Falmer, 2004.

Schwartz, F. Supporting or subverting learning: Peer group patterns in four tracked schools. Anthropology and Education Quarterly (12): 99–121, 1981.

Sharan, S. Cooperative learning in small groups: Recent methods and effects on achievement, attitudes, and ethnic relations. Review of Educational Research (50): 241–271, 1980.

Shavelson, R. J., and H. W. Marsh. On the structure of self-concept. Hillsdale, N.J.: Erlbaum, 1986.

Sheets H. R., and E.R. Hollins. Racial and Ethnic Identity in School Practices: Aspects of Human Development. Mahwah, N.J: L. Erlbaum Associates, 1999.

Shields, C. M. To group or not to group academically talented or gifted students? Educational Administration Quarterly (32): 295–323, 1996.

Simmons, R. G., and D. A. Blyth. Moving into adolescence: The impact of pubertal change and school context. Hawthorne, N.Y.: Aldine de Gruyter, 1987.

References

Slavin, R. E. Cooperative Learning. Review of Educational Research, (50) 2: 315–342, 1980.

Slavin, R. E. Achievement effects of ability grouping in secondary schools: A best-evidence synthesis. Review of Educational Research (60): 471–499, 1990.

Soskice, D. W. Social Skills From Mass Higher Education: Rethinking The Company-Based Initial Training Paradigm. Oxford Review of Economic Policy (9) 3: 101–113, 1993.

Stevens, P., R. Lupton, T. Mujtaba, and L. Feinstein. The Development and Impact of Young People's Social Capital in Secondary Schools. London: Centre for Research on the Wider Benefits of Learning, 2007.

Tett, L., and K. Maclachlan. Adult literacy and numeracy, social capital, learner identities and self-confidence. Studies in the Education of Adults (39): 150–167, 2007.

Tierney, J., and J. Grossman. Making a Difference: An Impact Study of Big Brothers/Big Sisters. Philadelphia, Pa.: Public/ Private Ventures, 1995.

Valencia, R. R. Chicano School Failure and Success: Research and Policy Agendas for the 1990s. London: Falmer Press, 1991.

Vanfossen, Beth E, James D. Jones, and Joan Z. Spade. Curriculum Tracking and Status Maintenance. Sociology of Education. (60) 2: 104–122, 1987.

Way, J. W. Achievement and self-concept in multi-age classrooms. Educational Research Quarterly (6): 69–75, 1981.

Weinstein, R. Perceptions of classroom processes and student motivation: Children's views of self-fulfilling prophecies. In Research on Motivation in Education, Vol. 3: Goals and cognitions, edited by C. Ames and R. Ames. New York: Academic Press, 13–44, 1989.

Wertheimer, A. Images of Possibility. Creating Learning Opportunities for Adults with Mental Health Difficulties. Leicester, UK: National Institute of Adult Continuing Education, 1997.

West, L. Beyond fragments: Adults, motivation, and higher education : a biographical analysis. London: Taylor & Francis, 1996.

Westwood, J. The Impact of Adult Education for Mental Health Service Users. The British Journal of Occupational Therapy (66) 11: 505–10, 2003.

Wigfield, A., and J. S. Eccles. Test Anxiety in Elementary and Secondary School Students. Educational Psychologist. (24) 2: 159–183, 1989.

Wigfield, A., J. S. Eccles, D. Mac Iver, D. Reuman, and C. Midgley. Transitions during early adolescence: Changes in children's domain-specific self-perceptions and general self-esteem across the transition to junior high school. Developmental Psychology (27) 4: 552–565, 1991.

Wilczenski, F. L. Changes in attitudes toward mainstreaming among undergraduate education students. Educational Research Quarterly (17): 5–17, 1993.

Wilczenski, F. L., T. Bontrager, P. Ventrone, and M. Correia. Observing collaborative problem-solving processes and outcomes. Psychology in the Schools (38) 3: 269–281, 2001.

Wilkinson, R. G. Unhealthy societies: The afflictions of inequality. Oxford, UK: Routledge, 1996.

Wilkinson, R. G. Health inequalities: relative or absolute material standards? British Medical Journal (7080) 314: 591–595, 1997.

Imprint

The study on "The Wider Benefits of Learning" comprises the following 5 parts.

Part 3:
Learning, Life Satisfaction and Happiness

Part 1:
Learning and Identity

Part 4:
Learning and Community Vitality

Part 2:
Learning and Health

Part 5:
Learning Spill-overs and Interplays

The parts of the study can be downloaded from www.elli.org

ELLI
European Lifelong Learning Indicators

Bertelsmann Stiftung