Are we on the right track with career learning?

Many efforts are made in the Netherlands and other countries to foster career learning. It is claimed that it is possible, worthwhile and necessary to foster the development of career competencies and career identity in education. This article challenges this claim. It is argued that the ambitions of career learning do not match actual knowledge and understandings from developmental and neuropsychology. Instead, a phased model for career development is proposed.

Keywords: brain development, career competencies, career identity, career learning, ego development, learning environment, maturation, reflection, self-direction

Introduction

Career learning may be defined as the process by which people develop a career identity and career competencies, the abilities to guide their own learning and work careers (Meijers, 2009). In the Netherlands as well as in many other countries, efforts are made to create a learning environment in education that fosters career learning (Meijers, Kuijpers, Gundy, 2013; Winters, 2012; Van Geffen, 2011; Hooley, Marriott, Watts, Coiffait, 2012; Gravina, Lovšin, 2012). These efforts depart from the conviction that it is possible, worthwhile and even necessary that students develop a career identity and career competencies during their education. I cite some authors to illustrate. In the context of the European program ‘Career Learning as a Success Factor for Lifelong Learning’, Van Geffen (2011, p. 5) writes: “The best place to learn this [the capability of self-directing the career TL] is in school”, and “Career learning helps young people to discover who they are”. A recent report of the Pearson Think Tank with the International Centre for Guidance Studies states: “Schools have a moral responsibility to ensure that young people leave school with the skills, knowledge, attitudes and attributes to manage their life, learning and work.” (Hooley, Marriott, Watts, Coiffait, 2012, p. 7). Winters (2012, p. 206) writes in her dissertation: “Due to the individualisation of society and the rise of a service economy, youngsters have to develop a career identity.” In a discussion about the results of career learning research in the Netherlands, Meijers and Kuijpers (2011, p. 12, translated TL) say: “Our research on career development in vocational education shows that students are
capable and motivated to develop and to use career competencies.” And Kuijpers says in an interview: “If you don't learn it in puberty, you will not be able at 25” (Vieze-Fock, 2012, p. 7).

This article does not question the worth of career competencies. The question is: is it really possible, worthwhile and necessary to develop them in education. I will argue that the answer to a great extent is no. My arguments stem from literature about cognitive and personal development during life and from recent findings about the development and working of the human brain. My long experience in career guidance and counselling has influenced my thinking. I will argue that career learning should better take into account the realities of psychological development.

**To what extent is it possible to develop career competencies in education?**

The development of career competencies requires a higher order learning process. On the basis of Kuijpers' (2003) research, in the Netherlands the career competencies are usually described in three components: career reflection (reflection on one’s own abilities and motives), career development (exploration and proactive directing of the career) and networking (Kuijpers, Meijers, Gundy, 2011). All this contributes to the development of a career identity (Meijers, Kuijpers, Winters, 2010). One of the definitions of this construct is: “the commitment a person has towards specific occupational activities or a specific career” (Meijers, Kuijpers, Gundy, 2013, p. 3). Career competencies and career identity will develop if the learning environment satisfies three criteria. It should be “an environment in which the student can get real-life work experience (i.e., a problem-based curriculum), has a say in his/her own learning process (i.e., an inquiry-based curriculum), and, finally, can participate in a career-oriented dialogue about his/her learning experiences with work” (Kuijpers, Meijers, Gundy, 2011, p. 23).

Departing from the premise that it is worthwhile and necessary, an impressive amount of research has been carried out in the Netherlands to prove that it is possible to develop career competencies and career identity in education. There is indeed evidence for this (Meijers, Kuijpers, & Winters, 2010; Meijers, Kuijpers, Gundy, 2013) but the evidence is subject to limitations. Critique is possible on the constructs of career competencies and career identity and the validity and norms of the measurement of these constructs (Luken, 2011a). The vast majority of the research is executed by a cross-sectional method. Only in one case a longitudinal design was utilised (Winters, 2012). The instruments used were mostly questionnaires. Self-assessments of students of their own career competencies and identity correlate with their ratings of the learning environment. This type of research does not warrant conclusions for cause-effect relations and for proposing educational reforms (Wilson, 2011).
According to Meijers, Kuijpers, and Winters (2010) the development of career competencies demands far reaching reforms in education. As mentioned in the introduction of this article the learning environment should be practical and dialogical and should offer space for self-direction for the student. To realise this, profound changes in the content, organisation and culture of education are necessary. This implies, inter alia, transformative leadership and new skills, new attitudes, and even a new professional identity of the teacher (o.c.). All this turns out to be extremely difficult to achieve (o.c.).

The main caveat is that until now only small gains on the career competencies are realised. The influence of teacher and learning environment appear very limited (Kuijpers, Meijers, 2009b; Mittendorf, 2010; Meijers, Kuijpers, Gundy, 2013). The given explanation is that education is not yet enough practical, dialogical and self-directed. The conclusion is drawn that the educational reforms should be extended further (Meijers, Kuijpers, Winters, 2010). But another explanation is possible, namely that life experiences and biological maturation are needed for the development of career competencies and career identity. Education cannot provide these.

To shed light on this issue, the next paragraph presents an overview of scientific literature on the development of some abilities that are closely related to career competencies and career identity, namely identity in a more general sense, and self-direction.

The development of self-direction and identity

Consciousness and self-direction

Kegan (1994), and researchers inspired by him, have conducted numerous studies on the development of 'consciousness', in the sense of the mental level at which experiences are organised and interpreted. Three first 'levels of consciousness' run parallel to the main phases of development described by Piaget (o.c.). Level 3 corresponds to what Piaget called the formal-operational stage. It implies among other things that the person is capable of abstract thinking, empathising, and having ideals and images of the future. Piaget's description of development stopped at this third level, but according to Kegan people can reach a fourth and sometimes even a fifth stage in the course of their life. Only at level 4, people are able to take a mental position separate from the roles they play and separate from their psychological setting. Only then they can develop an overview large enough to prioritise between future images and to connect them with the present. Level 4 is also required to be able to separate oneself from the social influences of parents, friends and authorities and to develop an own vision on world and self. If self-direction is defined as a process where people direct their actions towards goals that they set and review by themselves, based on a personal vision (Luken, 2009) – then Kegan's level 4 is needed for self-direction.
The Kegan consciousness levels were assessed of several thousand of people (mostly in the United States). This was done by a laborious but reliable and valid method, called the subject-object interview (Kegan, 1994; Hoare, 2006). The results show that level 3 is the modal level for adults. Only 20% of the population has reached level 4, usually only later in life. Of people with a college degree, 50% reach level 4. In adolescent and young adult students self-direction in the given sense is extremely rare.

**Ego development**

The term ‘ego’, as used in the theory of Loevinger (Lê Xuân Hy, Loevinger, 1996), refers to an organising frame of reference or filter that interprets experience and excludes discrepant information (Pfaffenberger, 2005). Westenberg (2002, p. 316) describes the ego as “*the spectacles through which we perceive ourselves and others in social interactions and relationships.*” The level of development of the ego has been investigated in many tens of thousands of people around the world. For this, sentence completion tests are utilised. The reliability and validity of these measures have been convincingly demonstrated (Manners & Durkin, 2001), in the Netherlands by Westenberg (2002).

Loevinger’s model of development, that is derived from the empirical findings, distinguishes nine levels or stages of ego development (Nelck-da Silva Rosa, Schlundt Bodien, 2004). Around the 13th year of life, the modal youngster takes the step from the third, ‘Self Protective’ to the fourth, ‘Conformist’ level. His/her point of view shifts then from an egocentric to a group-centred perspective. The youngster now identifies with the group to which he or she belongs. This phase is characterised by a preoccupation with appearance, material things, and being part of a group. In the 18th year, approximately 40% reaches the fifth, ‘Self-aware’ level. The look becomes more inward then, and there is a need for individuality, but the adolescent is still very sensitive to appreciation and rejection. Many remain long, sometimes even lifelong on this fifth level, but part of the youth reach a sixth, ‘Conscientious’ stage. At age 18 this is 8% and at 25 years 21%. At this level, the self observing attitude, that characterises the person at the Self-aware level, shifts to a focus on self-improvement. The person then feels responsible for organising his own live and make choices based on his own ideals and beliefs. Thus in adolescent and young adult students self-direction in the sense of ego level 6 is rare.

**Identity**

Kroger (2007) conducted a meta-analysis of cross-sectional and longitudinal studies of identity status of young adults. She concludes that many young adults have not yet developed their own identity. For example 11 cross-sectional studies on the age group of 23-29 years show that only 31% has reached the ‘Achieved identity’ state. 25% is in the ‘Moratorium’ state, i.e. they are in the process of the formation
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of an identity. But the rest, almost half of these young adults are in the ‘Foreclosure’ state (a prematurely closed identity, i.e. commitment without exploration) or in the ‘Diffusion’ state (neither commitment nor exploration).

Other development theories and interim conclusion

There are numerous other empirically supported theories about cognitive and personal development (Dawson-Tunik, 2004; Hoare, 2006), for instance the theories of Fischer on differentiations within formal-operational functioning (Fischer, Bidell, 2006), Kohlberg on moral development (Kohlberg, Hersh, 1977), Perry on intellectual and ethical development (Rapaport, 1984), Torbert on professional development and leadership (McCauley et al., 2006) and Kuhn on critical thinking, epistemology and multivariable causal reasoning (Kuhn, 1999; Kuhn, Katz, Dean, 2004). The theories and research lead to the conclusion that most adolescents and young adults are not capable of self-direction in the sense of conscious own choices on the basis of a personal vision. The most important things they lack are overview and autonomy. The average young adult is still strongly influenced by the social environment and is not yet enough capable of overviewing thinking and feeling and past, present and future. With age, the probability of attaining higher developmental levels increases.

The development of the brain

To shed light on the question at what age our brain enables self-direction, we discuss its development. Our brain ‘matures’ until somewhere between age 20 and 30 (Crone, 2009). Maturing refers to a decrease in the quantity of grey matter and an increase in white matter. The most important constituents of grey matter are neurons and short-distance connections between them. White matter consists mostly of long-distance nerve-fibers that are ‘myelinated’, i.e. bundled and isolated by a greasy, white substance. Myelination prevents that irrelevant stimuli are transferred. Moreover, the signals in the fibers travel up to 25 times faster.

The last part of the brain, where the shift in the proportion between gray matter and white matter occurs, is the prefrontal cortex, the area of the brain behind the forehead. The maturation of this part of the brain continues until around the age of 25 (Craik, Bialystok, 2006; Goldberg, 2009). Girls walk ahead of boys two years in the maturing of the brain, due to genetic and hormonal differences (Zaidi, 2010).

The prefrontal cortex (PFC) acts as the ‘conductor’ of the brain (Goldberg, 2009). Here, high level models of self and world are formed (Stuss, Anderson, 2004). Furthermore the PFC plays an important role in capabilities as impulse control, understanding of the emotions of other people, consciousness of own feelings, solving (moral) dilemmas, overviewing complex matters, integration of affect and cognition, decision making, thinking ahead, and planning. The myelinated ‘information
highways’ of the prefrontal cortex with the rest of the brain, which are necessary for well fulfilling the conductor’s role, continue to mature in adulthood. According to some sources this process goes on until around the age of 50 or 60 (Craik, Bialystok, 2006; Goldberg, 2009; Blakemore, Choudhury, 2006).

As a consequence of the absence of a mature prefrontal cortex and mature ‘information highways’, young people have difficulties in integrating thinking and feeling, setting priorities, assessing risks and using of a long-term perspective. They take decisions on other places in the brain than adults, more backwards (Fernandes, 2006). Short-term rewards play a decisive role in decisions for youngsters and they tend to neglect risks, especially risks in the long term. According to Crone (2009) adolescents show only at the age of sixteen to eighteen the first signs of ‘somatic marking’, i.e. the delivery of unconscious emotional signals by the autonomous nerve system and the use of these in deciding. “Adolescents may know perfectly well in a rational way which situations are dangerous and which are not, but they do not feel it” (o.c., p. 60, translated TL). Brain scans show that, when young people make choices, the (imaginary) preferences of others play a key role (Blakemore in Jolles, 2011).

The brain is a plastic organ. Learning implies that old short-range connections are cut and new ones develop. In this way, neurons can function in new networks. This happens and is visible in the grey matter. During life, plasticity diminishes. The extent and rate of the development of white matter is largely a matter of maturation. Though there is some evidence that training can have influence on white matter development (Scholz, Klein, Behrens, Johansen-Berg, 2009), the growth of the highways in the brain, the myelinated long distance links between brain regions, is determined mainly by biological and genetic factors (Craik, Bialystok, 2006; Keulers, Goulas, Jolles, Stiers, 2012).

**Interim conclusion**

The development theories and the new understandings from brain research support each other. From both perspectives it is clear that development does not stop after puberty and that girls develop faster than boys. Brain scans now show phenomena in the brain that seem clearly associated with the fear of rejection and the influence of others, that development scientists had established earlier. The increase in consciousness, overview and autonomy that enable self-direction, seems related to the maturation in young adulthood of the prefrontal cortex and to the growth of the white matter connections between brain regions, which continues even much longer. This maturation allows better integration of thinking and feeling, and superior modelling of the own person and the external reality. Both are necessary for the development and realisation of a well grounded, own course.
Is it useful to try to foster development?

The aim of this section is to shed some light on the question of the possible long-term consequences of attempts to develop career competencies and career identity in education. Will the students have more career competencies and better career identities as adults?

Career identity development

Unfortunately, there is little research that covers entire careers, from childhood to old age. One of the positive exceptions is Whitbourne (2010). She follows since 1966 the lives and careers of almost 200 people in the United States. Most of them are now about to retire. Based on her data, Whitbourne distinguishes different career patterns. I will mention the two that occur most frequently and together cover 75% of the population. The largest group (47%) that Whitbourne describes, is named ‘the authentic road’. These careers begin with some searching and wandering. People develop in this way an increasing ability to make adjustments in the course of their career. They ultimately develop authenticity, a clear identity, success and contentment. The second major group (27%) is called the ‘the straight and narrow way’. People in this group continue in a direction that was taken early in the career. They avoid risk and explore little. Their identity is rather rigid. Part of this group is successful and happy, but compared to ‘the authentic way’ there is an increased risk of chronic dissatisfaction or severe crises in the later stages of the career. Jepsen and Choudhuri (2001) found in a longitudinal study that about one third of the 170 subjects they studied had stable career patterns over a 25 year period after high school graduation, but that the people in this stable group were relatively little satisfied with their careers.

Identity is a two-edged sword. It provides clarity and direction, but excludes the person from experiences in other fields (Brophy, 2009). In a stable environment, early specialisation provides an advantage. But in a rapidly changing environment, like ours today, flexibility has more advantages. Then the disadvantages of an early, clearly defined identity may be great. This is confirmed in the study of Whitbourne. Some wandering in the early career will often lead eventually to a more positive development than an early taken stable direction. All this corresponds with my own observations as a career counsellor and researcher. Experiences in more than one direction is conducive to self-knowledge and flexibility, elements that are decisive for career success in the long term. A key problem in many careers is sticking too long to self-images that were adopted from others at an early age.

Personal development

The various development theories and research projects, discussed in the section ‘The development of self-direction and identity’, offer little clarity about what it is
that causes development or about what happens in the transition from one stage of
development to the next. Nevertheless, some conclusions are possible.

Training, aimed at accelerating specific aspects of cognitive development along
the stages of Piaget, often has only a temporary effect. Trained children get
a lead, but untrained children may catch up. If training starts too early, when
the child is not ‘ready’ for it, the effect may in the long run even be negative
as it may undermine interest or self-efficacy or as it may fixate suboptimal ap-
proaches (Bjorklund, 2009). Fischer and Bidell (2006) describe disturbances of
development caused by early speeding up of growth as ‘the Piaget effect’.

A rapid ego development in youth does not imply a high ego level as adult. For
example Westenberg and Gjerde (1999) found in a longitudinal study that chil-
dren who led the way at age 14, and had already reached Loevinger stage 5 at
that age, relatively often stagnated in their development later on. Children who
were in stage 4 at 14 years, were more often at the self-directing sixth level at
age 23. Also in a longitudinal study of Syed and Seiffge-Krenke (2013) the chil-
dren with the highest level of ego development at age 14 do not have the highest
level at age 24. Moderate progression seems ultimately to lead to higher levels
than fast early development.

Generally speaking, intelligence, socioeconomic status, educational level,
and age correlate positively with the level of development. There is little clar-
ity on why many people do not reach higher levels of development or do not
achieve an identity. What seems necessary for development are life experiences
that put the person enough but not too much off balance, at a time when he or
she is ready for this (Pfaffenberger, 2005; Kroger, 2007).

Brain development

As indicated in the section ‘The development of the brain’, fostering the maturation
of the brain does not seem possible. But if it were possible, would it be useful? An
argument for a negative answer is that the cortex of very gifted children matures
more slowly than is the case with less gifted children (Shaw et al., 2006). This might
imply that, if we were able to foster the maturation, this would have negative con-
sequences for intelligence. Another argument for a negative answer is that the part
of the brain that matures last (the prefrontal cortex), ages first (Goldberg, 2006). So,
if we could foster the maturation of the prefrontal cortex, this might imply that the
decline would start earlier. A rush to supply mature workers to the labour market,
could then be detrimental for their employability 40 years later.

A more general and less speculative argument is that the shift from gray
to white matter – the core of the maturation process – limits plasticity. The myelina-
tion of axons limits the possibility of formation of new synapses (Fields, 2008). An
immature state has significant advantages in terms of flexibility and learning (Jolles,
Crone, 2012; Bjorklund, 2009).
Development of reflection

Career Reflection is considered an important part of the career competencies (e.g. Meijers, Kuijpers, Gundy, 2013). It consists of reflection on one’s own abilities and motives. In the Netherlands, students are encouraged to reflect in conversations with teachers. In these conversations, meaning is given to special experiences, i.e. experiences with an emotional charge. From these, conclusions are drawn about abilities and motives, and on this base self-concepts are constructed (Den Boer, Stukker, 2012; Kuijpers, 2012).

In my opinion, not only identity but also reflection could be a double-edged sword. Many studies have reported that students reflect more when the learning environment encourages them to do so (Meijers, Kuijpers, Winters, 2010). Whether they reflect better, has not been investigated. Also, the expected positive effects of reflection have not been established. No significant positive correlations were found in the largest studies, and in several cases there existed even significant negative relationships between career reflection and one or more of the desired outcomes, i.e. success in school, learning motivation, fit of choice, stay in school, and career identity (Kuijpers, Meijers, 2005; Meijers, Kuijpers, Bakker, 2006; Kuijpers, Meijers, 2009a).

From studies in other contexts and countries, it has become clear that there is certainly no direct positive relationship between self-reflection on the one hand and self-knowledge, success and happiness on the other. In general, a relationship is absent or even negative (Luken, 2011b). One explanation is that people often cannot know the causes of their feelings, behaviour or preferences. If they make up causes, they may come to believe in what they made up, and this may have negative consequences (Wilson, Dunn, 2004; Bar-Anan, Wilson, Hassin, 2010). Another explanation is that thinking, in contrast to what many people believe, often has a negative effect on the quality of decisions (Strick et al., 2011). A last explanation is that reflection consists of an associative thinking process that is difficult to control. Questions about the self, career management and the future have paradoxical and confusing aspects. For this reason career reflection might turn into worry and rumination which eventually increases the risk of depression and other psychological problems (Nolen-Hoeksema, Wisco, Lyubomirsky, 2008).

Especially among young people, there is risk. Early adolescence is of itself a period where young people tend think about themselves very much (Crone, 2009; 2012). This could perhaps become too much, when they are encouraged, as they are now in education. A point to consider here is that self-reflection among young people activates regions of the brains that are partly different from adults (Sebastian, Burnett, Blakemore, 2008). An – as yet speculative – risk is that in the plastic brain the growth of synapses in less functional parts is stimulated. Maybe this might be comparable to the drilling of a wrong stroke or movement in sports.
The thinking of adolescents is, as noted earlier, strongly influenced by the social environment (Crone, 2009; 2012). As a consequence, the self-concepts that are brought about in self-reflection and in the dialogues that stimulate self-reflection, may not originate from the youngster himself but be ingrained by others. Prejudices or stereotypes of others, for example, may be adopted. The literature on false confessions (e.g. Redlich, Goodman, 2003) and false memories (e.g. Drivdahl, Zaragoza, Learned, 2009) demonstrates clearly that people in general and young people in particular can easily believe in the stories they are made to tell, even if they are not true. Reflectively elaborating on aspects as meaning and emotional implications increases both false belief and false memories (o.c.).

In addition, the form that young people give to their self-concepts is probably less functional. Usually, they tend to think in black and white terms (true – not true, good – not good) and they overestimate the possibilities of logical thought (Seifert, Hoffnung, 1987). As a consequence their self-images probably get the form of ‘entity self-theories’, i.e. self-descriptions in terms of evaluative, context-independent properties. This way of looking at oneself during the educational career, increases the risk of loss of self-esteem and defensive reactions to failures, and reduces intrinsic motivation, perseverance, and performance (Dweck, Grant, 2008).

In addition to the form, the degree of realism of the self-image is a point of interest. As mentioned before, students are encouraged to draw conclusions about themselves based on their own experiences (Den Boer, Stukker, 2012; Kuijpers, 2012). But what can their experiences as young people tell about the development of their future possibilities? There is a risk, that self-images that are formed this way, might stay too close to the present reality and thereby inhibit development. Unrealistically optimistic self-concepts can be very functional in the sense that they boost confidence, exploration, perseverance, and trying – in short: development (Bjorklund, 2009). For example, the boy that, guided by a teacher and a mentor, concludes that he is a shy type (Winters, 2012, p. 121) might exclude prematurely commercial vocations.

There are at least two connected problems. One is that people in general, but young people in particular, highly underestimate the degree to which their personalities, preferences and – most of all – values will change in the future. People wrongly believe that they will remain the same (Quoidbach, Gilbert, Wilson, 2013). The second connected problem is that self-concepts are extremely resistant to change. They influence behaviour in a way that makes contradictory experiences unlikely (Bergner, Holmes, 2000). For example, the student who thinks he is shy is therefore passive in contacts. Even if self-concepts are contradicted by facts, they often remain unchanged because the facts are distorted or not observed (Greenwald, 1980).
Interim conclusion

Bjorklund (2009, p. 277-278) is convinced that, if we can slow down the pace of growing up in childhood, we will enter adulthood later, but better prepared for the important decisions of life. And we would be happier as children.

Even if we do not share Bjorklund’s conviction, one conclusion that must be drawn from this section is that rapid development is not automatically better than modal development. It is not sure if attempts to foster the develop of career identities, self-concepts, and self-direction do have sense in the long run. There are even arguments and indications that warn for possible undesirable consequences.

Conclusions and recommendations

The question of this article was: is it really possible, worthwhile and necessary to foster career identity and career competencies in education? The following conclusions may be drawn:

- It is only possible to a very limited extent to develop career identity and career competencies in education. Even if education fully meets the three demands of a career learning environment (i.e. practical, dialogical, and self-directed), then it still cannot provide for the necessary life experiences and biological maturation that come with aging.

- About the long term development of career identity and career competencies only little is known. It is by no means certain that fostering the development process in education leads to better outcomes later in life. The opposite (stagnation of development or lower final results) can as yet not be excluded. Further investigation and experimentation are necessary. Massive reforms to create career learning environments in education are unwarranted.

- The argument that society needs career competent participants is convincing. The conclusion that it is necessary that education delivers career competent participants, however, is not justified. The data and arguments of this article suggest that education can only provide a base for the development of career identity and career competencies. Guidance and stimulation for adults should build further on this base. As yet it is not clear what this base should look like and how this is best accomplished.

Career learning should pay more attention to the knowledge and understandings that developmental and neuropsychology have produced in the last decades. A phasing in terms of guidance, education and counselling as proposed by Savickas (2008, 2012) could offer a structure for this.

The main elements can be described as follows:

- Restoration or revitalisation of vocational guidance by independent professionals. Independent, because the interests of education and student run parallel
only partially. Professionals, because of the complexity and importance of the work. These kind of services exist in many countries, but they are not well maintained everywhere. In the Netherlands they were largely broken down in the last twenty-five years. In England they are menaced (Hooley et al., 2012). In vocational guidance, characteristics of the youngster are mapped using validated tests that reflect the abilities, interests and personality traits. The professional plays the role of a guide. On the basis of expertise and information, he proposes educational programs, occupations or functions that fit the person. The professional delivers structured guidance for the choosing youngster or gives clear advice, if necessary. The goal is a good match, a clear, well based idea for the next step in the career, without claims for long term validity of this match for steps in a further future. The role of vocational guidance can be limited if the educational system provides ample opportunities for exploration of directions and broad curricula that make it possible to postpone important decisions.

Career Education. This consists of a structured curriculum that promotes ‘career maturity’. Examples of components are excursions, lessons about the world of work and the labour market, internships, writing and exploration assignments, and training in making choices. This could be supplemented by subjects like developmental psychology and futurology, career studies, serious games, and mindfulness.

Lifelong stimulation of career development and opportunities for coaching and counselling. Examples of stimulation are employers providing feedback, stimulating questions, learning opportunities, and challenging new tasks. “Counselling and coaching for self-construction aims to help clients articulate a personal mission statement that gives them a beacon with which to define who they are, set priorities, and stay on course” (Savickas, 2008, p. 111).

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