



Education 3-13

International Journal of Primary, Elementary and Early Years Education

ISSN: 0300-4279 (Print) 1475-7575 (Online) Journal homepage: <https://www.tandfonline.com/loi/rett20>

Self-determination and development of emotional-social competences and the level of school achievements in 10–11-year-old Polish students

Tomasz Knopik & Urszula Oszwa

To cite this article: Tomasz Knopik & Urszula Oszwa (2019): Self-determination and development of emotional-social competences and the level of school achievements in 10–11-year-old Polish students, *Education 3-13*

To link to this article: <https://doi.org/10.1080/03004279.2019.1686048>



Published online: 31 Oct 2019.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



Self-determination and development of emotional-social competences and the level of school achievements in 10–11-year-old Polish students

Tomasz Knopik^a and Urszula Oszwa^b

^aFaculty of Pedagogy and Psychology, Institute of Psychology, Maria Skłodowska-Curie University, Lublin, Poland;

^bFaculty of Pedagogy and Psychology, Institute of Pedagogy, Maria Skłodowska-Curie University, Lublin, Poland

ABSTRACT

Education in Poland tries to keep up with the extremely dynamic civilisation changes in order to prepare students to face the challenges of the future. However, it must face the historical burden symbolically defined as *homo sovieticus* – a man giving up his own agency to the system and authority. The aim of the article is to evaluate the effectiveness of the implementation of the assumptions of self-determination theory (SDT) in developing the emotional-social competences of students (described using the original TROS-KA model) and gaining school achievements. The study was conducted among 10–11-year-old students ($n = 94$), parents ($n = 94$) and teachers ($n = 28$). It confirmed that the annual teaching cycle based on SDT assumptions was more effective (compared to standard practices) both in terms of developing a sense of competence (measured using the TROS-KA scales) as well as school achievements (measured by school grades). Moreover, teachers and parents noticed an increase in the emotional-social competences of the students, their greater involvement in the learning process and an increase in their independence. SDT can be a key strategy in the process of increasing the autonomy of the Polish school and, consequently, in the process of reducing the presence of *homo sovieticus* features in the mentality of Polish teachers.

ARTICLE HISTORY

Received 1 July 2019

Accepted 23 October 2019

KEYWORDS

Emotional and social competences; self-determination theory; transferable competences; life-useful skills

Introduction

Self-determination theory (SDT) can be considered as one of the better verified psychological concepts in the educational context. Despite its global popularity, it did not receive attention in the Polish education system. This article is one of the first attempts to fill this gap. Starting from the postulate that one of the key tasks of a modern school is shaping transferable resources and skills of students, based on the concept of SDT, the authors present the effectiveness of strategies for creating an environment conducive to the development of emotional and social competences (called a sense of competence – an analogy to intrinsic motivation). They set their analysis in a socio-cultural context, referring to the figure of *homo sovieticus*, symbolising the mental burden on the communist system that existed in Poland in 1945–1989 and still has been mentally present in the Polish system of education.

According to Deci et al. (1991), a student spends about fifteen thousand hours at school over two decades of his/her life. However, this does not have to mean treating the school as a necessary evil, an obligation imposed from outside. The school is a space where it is possible to strengthen the intrinsic

motivation of both students and teachers (Niemiec and Ryan 2009; Ryan and Deci 2017; Wang 2017). Promoting intrinsic motivation based on SDT assumptions should be linked to the school's efforts to increase student choice, greater teacher acceptance for student initiative, greater responsibility for the planning process, organisation and assessment of learning (cf. Deci et al. 1991). Such a strategy, however, must take into account the socio-cultural barriers for implementation (Ryan and Deci 2011; Gaudreau 2016), which is particularly evident in the context of Polish education.

Limited autonomy of Polish school

Researchers of Polish education point out the strong dominance of the transmission model of knowledge transfer (Klus-Stańska 2010; Dylak 2013; Śliwerski 2016). The student is taught, formed in accordance with the accepted standard (norm). In this paradigm, the school itself as an institution exercising power (Foucault 2009) enslaves young minds, depriving them of autonomy and the opportunity to fully participate in the planning and implementation of their own pro-development activities, without taking into account their individual preferences and predispositions. Teachers' activities are subordinated to the implementation of the core curriculum, which, as an official document binding throughout the country, precisely sets out teaching and learning goals of education. In addition, every Polish teacher must take into account more than twenty other regulations, which means that s/he often falls under the role of an employee producing documentation instead of active teaching (Federowicz 2013).

Strong centralisation of Polish education goes hand in hand with the unification of the methodological workshop of Polish teachers. Instead of creating teaching situations conducive to independent perception and problem solving by students, the school provides ready information, assuming that it creates comprehensive knowledge, described in detail in the core curriculum. However, this information is a collection of randomly selected facts that, if not subjected to critical reflection and disordered, cannot become consistent knowledge (Dylak 2013). As Klus-Stańska (2012) writes, traditionally persistent ways of developing knowledge at Polish school have a compelling character in terms of identity, intellectual and social dimensions.

Polish teachers also perceive school as an oppressive institution (Nowak-Dziemianowicz 2014), which primarily causes fear, based on a chronic process of controlling. There is a powerful institution of pedagogical supervision and control in the Polish education system, known as School Board for Education and Upbringing. This translates into a low level of teachers' sense of independence, the belief that changes in education do not depend on them, but are imposed by the system (Rubacha 2000). It results in low degree of expressing autonomy by the Polish teachers. According to data from the Ministry of National Education from 2017, only 2% of Polish teachers develop and implement original curricula in their school methodology. And it is the teaching programme that should allow to express individual vision of education based on the current core curriculum. It concerns such key elements of the process of education and upbringing as: philosophical assumptions and goals of education, methods, forms and content of teaching, ways of assessment and motivating students (Dylak 2000).

The constancy of the transmission paradigm of education in Poland is conditioned by the historical legacy – over forty years of communism that shaped the new citizen – the so-called *homo sovieticus*. Tischner (2005) popularised, although in a slightly different sense, the term coined by Russian sociologist Aleksandr Zinoviev. According to him, *homo sovieticus* is the one whose consciousness is defined by being, as opposed to a man who tries to subject his being to free consciousness (Tischner 2005, 145). Communism relieved man of his responsibility for his existence. It gave him/her the illusion of security, introducing a mechanism of social equality and limiting his/her autonomy. Although it belongs to the past, its influence has still been active in many fields of life in Poland.

Paradoxically, the new system has consolidated the old inclinations, which, according to Erich Fromm, could be called an escape from freedom, whereas in SDT rhetoric – an escape from intrinsic motivation respectively. In this sense, Tischner wrote about the non-regained subjectivity of Poles,

the dispersion of responsibility for their own being in an anonymous group – mass (Heidegger 2004). The former beneficiary of the communist system becomes a beneficiary of the new capitalist reality and makes clear demands on it. Instead of taking matters into their own hands and subjecting them to personal reflection, they expect help and interpretation from outside. The essence of social bonds are calculations what pays off, instead of a genuine sense of relatedness. Instead of intrinsic motivation that drives actions, one can observe submission to standards, subordination to authority and expectation of initiative from others.

These philosophical and sociological analyzes should be included in the perspective of psychological studies of the Polish school, which as a public institution is involved in dominant mental scripts and consolidates them. Only taking into account this context, one can see, how difficult it is, even revolutionary, to attempt to implement the SDT concept into Polish education system. Perhaps this difficulty is also one of the key reasons for the lack of SDT presence in Polish educational psychology. *Homo sovieticus* and a self-determined person – these are not only oppositional visions of man, but also of society. It can therefore be concluded that the concept of self-determination brings in enormous emancipation potential – indispensable for Polish school and Polish society.

SDT and education

Self-determination theory is a meta-theory defining internal and external sources of motivation and their impact on cognitive and socio-emotional development of a person, as well as on individual differences among people (Deci and Ryan 1985). The considerations focus on three universal human needs: (a) autonomy, (b) competence and (c) relatedness and also the environmental factors that support and inhibit their satisfaction. This issue is an important advantage of SDT in the studies undertaken in the field of psychology of education – this theory defines implicit external conditions conducive to the development of intrinsic motivation and ultimately the well-being of man at every stage of his/her development, also in the relationship: student – school (Ryan and Deci 2019).

Educational psychology studies indicate that satisfying students' basic psychological needs in terms of autonomy, competence and relatedness is crucial to their internalisation of learning motivation (Taylor et al. 2014; Litalien et al. 2017). This translates into higher school achievements and effective adaptation to school conditions (Niemic and Ryan 2009).

Most of the attention of researchers verifying SDT in the context of education focuses on autonomy as the student's ability to influence individual and corporate learning, that is closely associated with two other universal needs highlighting in the theory – competence and relatedness.

Teachers' autonomy in teaching and students' autonomy in learning

Many studies conducted as part of the SDT paradigm are looking for relationships between student's and teacher's autonomy. This issue is particularly important in the context of Polish teachers who present quite low autonomy in their work area (EURYDICE 2008).

Roth et al. (2007) examined Israeli teachers and found that those who felt more controlled in their own professional activities were less involved in supporting the autonomy of their students.

Pelletier, Séguin-Lévesque, and Legault (2002) examined Canadian teachers from the first to the twelfth grade and noticed that the more teachers feel systemic pressure (e.g. the need to follow an external curriculum, emphasis on performance standards), the more they control the learning process of their students, not giving them space for independent actions and decisions.

De Naeghel et al. study (2014) related to the students' reading skills, indicate that the involvement of Flemish teachers in supporting student's autonomy most clearly explained the intrinsic motivation to read, especially among girls.

In the Nguyen and Deci (2016) study involving 384 undergraduate students, the share of motivational regulation in moderating the relationship between the tendency to perfectionism and setting high standards and academic well-being was analysed. When a students were educated in a highly

controlling environment, they launched an internal control mechanism in the form of striving for perfection. If the environment supported autonomy and independence in learning, students tension, related to the acquisition of knowledge and skills resulting from the focus on obtaining high grades, gave way to experiencing the joy of learning. Students with a tendency to perfection who reported low level of environmental control, at the same time declared a lower level of anxiety and learning difficulties. On the other hand, when the external control was perceived by them as high, their internal tension also increased.

Autonomous student learning

The study by Jang, Kim, and Reeve (2012) among 500 Korean students shows that creating classroom conditions for full student engagement and at the same time strengthening their autonomy determines students' autonomy need satisfaction as well as it is its consequence (feedback). In addition, the factor that catalyzes the process of students' full involvement and participation in learning is partial satisfaction (e.g. increasing their own effectiveness, mastering the set goal, achieving and the interest in the situation).

It is worth emphasising that the role of supporting students' autonomy is independent of their achievements, i.e. the positive effect of such support is obtained by students with both high and poor learning outcomes (Guay et al. 2013).

In the study of Cheon et al. (2019) with the participation of 20 physical education teachers, the effectiveness of conducting activities focused on strengthening students' autonomy was checked. It was found that when the teachers supported the autonomy of the activity more, then their students were more involved in the classes and did not report dissatisfaction. In the case of the control group ($n = 17$ teachers), it turned out that the lack of activities supporting students' autonomy resulted in an increase in their frustration and a significant decrease in the involvement in classes.

An important element of implementing SDT is reaching for methodological solutions that support the development of students' involvement in the learning process. For example, studies on a group of 84 German students aged 10–12 have shown that in an outdoor learning environment, students showed significantly higher motivational behaviours for learning – regardless of their gender. Less self-regulated students benefited more from the outdoor setting than those who showed already a high intrinsic learning regulation.

Research conducted among 2266 Austrian students of the fifth, sixth and seventh grade showed that teachers' use of methods promoting self-reflection in learning positively affected students' autonomy and is a predictor of future attitudes towards lifelong learning (Lüftenegger et al. 2012).

The meta-analysis regarding general guidelines on teaching methodology undertaken by teachers to support their autonomous learning based on the SDT assumptions point to the following principles: (1) listen to the student carefully; (2) create opportunities for students to work in their own way; (3) provide opportunities for students to talk; (4) arrange learning materials and seating patterns so students manipulate objects and conversations rather than passively watch and listen; (5) encourage effort and persistence; (6) praise signs of improvement and mastery; (7) offer progress-enabling hints when students seem stuck; (8) be responsive to students' questions and comments; and (9) communicate a clear acknowledgment of students' perspectives (Reeve 2006, 231).

Núñez and León (2015) reviewed many studies on the role of teachers' support for the need for students' autonomy and found that positive impact includes: greater well-being, better performance, greater engagement and improved time management and attention span.

In addition, SDT's relationships with the ability to regulate emotions and social relations are increasingly emphasised, pointing to convergence with psychological concepts of wisdom (Ryan, Soenens, and Vansteenkiste 2019). This creates new perspectives for SDT applications in the process of education and upbringing.

The presented results of the empirical use of SDT in educational research have become an inspiration to undertake own study. Its goal was to show the relationship of innovatively used strategies supporting the need for autonomy, competence and relatedness of middle-school students with

their emotional and social competences and their learning outcomes in the context of the current education system in Poland.

The present study

Emotional and social competences as transferable resources in the TROS-KA / CARE model

The purpose of the study was to answer the following research questions:

- (1) Does the implementation of the SDT assumptions by teachers (care to meet the three fundamental needs of students: autonomy, competence and relatedness) to everyday school practice contribute to the increase of students' emotional and social competences?
- (2) Does meeting the students' needs defined by the SDT promote their higher school achievement (measured by means of the average marks)?

Emotional and social competences are transferable resources that can be used in a variety of contexts. Therefore, they constitute the basis for activities understood as goal-oriented activities (Domagała-Zyśk, Knopik, and Oszwa 2017). Involvement and participation of emotional and social competences can be seen when solving intellectual problems, talking to friends, planning your future and making decisions. The authors of the TROS-KA model emphasise that the key role of the school is to use the core curricula to shape transferable resources, as they constitute the largest capital from which students will derive profits as adults. The set of diagnostic tools and post diagnostic materials TROS-KA was developed in 2017 on the request of the Centre of Education Development in Warsaw. It is a model battery defining the standard of functional assessment as part of psychological and pedagogical assistance in the Polish education system.

The battery of five socio-emotional scales is intended for students aged 9–13 (middle school age). Their main developmental task is to develop a relatively lasting sense of competence. The universal (necessary for every human being) nature of the battery lies in the fact that on the one hand its scales can be a buffer during the identity crisis experienced in adolescence, on the other, they determine the scope and quality of the subjects' involvement in their future activities. From this point of view, the further cognitive, emotional and personality development of the student is conditioned by the level of the sense of competence.

The authors of the model, analysing standard therapeutic and developmental strategies aimed at supporting students with special educational needs (SEN), saw clear deficits in the area of planned activities aimed at developing their sense of competence (Domagała-Zyśk, Knopik, and Oszwa 2017). They also noticed that the main field of activity here is compensating or removing deficits (negativity effect), bypassing the positive strategy of constructing transferable resources and skills, which should form the basis of undertaken activities.

Emphasising the interactive nature of the process of shaping the sense of competence, the authors of TROS-KA, included in their model the role of the environment in creating optimal conditions for becoming competent. Thanks to this, TROS-KA is part of the transactional study of educational phenomena in which the importance of context for the development of students' competences is emphasised. This approach has been seen in recent years in many studies (Tomlinson 2014). As Lo et al. write (2019), explaining transactional ability models, smart context is a classroom enriched physically, materially, intellectually, and instructionally so that it excites and engages students (175). Referring to SDT, the positive role of the environment in shaping the sense of students' competence and their intrinsic motivation was defined by enabling the subjects to meet their three universal needs: autonomy, competence and relatedness (Table 1).

In order to operationalise the description of the sense of competence, the authors of TROS-KA used the theory of intelligence conducive to life success by Robert Sternberg (2005) and the concept of psycho-social development of Erik Erikson (2004). In this way, they defined the sense of competence as a set of emotional and social competences of the subject, such as: (a) coping

Table 1. The description of the competences constituting the person's skill set in the TROS-KA model and their relation with SDT.

Scale/ competence	Dimensions of competence	Psychometric properties of the scale	An environment conducive to the development of a given competence – relationships with SDT
T – coping with difficulties	<ul style="list-style-type: none"> • applying remedial strategies • learning from experience • setting goals adequate to the possibilities 	<p>Internal compatibility: Cronbach's alpha = 0.81</p> <p>Criterion relevance: Correlation of the scale with test results measuring similar components from 0.22 to 0.38.</p>	<p>The environment creates conditions for students to meet the need for competence and autonomy; thanks to external support, the student recognises his/her own resources, which makes him/her more competent, as well as independent and responsive</p> <p><i>Example: Teachers create tasks that are accompanied by instructions that indirectly (not explicitly) assist students in solving them.</i></p>
R – social relations	<ul style="list-style-type: none"> • scope and quality of relationships with others • understanding and controlling your emotions • understanding the emotions of others • willingness to cooperate. 	<p>Internal compatibility: Cronbach's alpha = 0.86</p> <p>Analysis of intergroup differences (group of students showing difficulties in interpersonal contacts and a group of students without this type of difficulty) $p < 0.001$</p>	<p>The environment is conducive to meeting students' need for belonging and relatedness; the student identifies common goals for the group, participates in cooperative learning, is responsible for the team's goals.</p> <p><i>Example: Teachers care for the identity of the class by co-defining action plans, weekly motto, and common rituals with students (e.g. greeting / farewell).</i></p>
O – self- esteem	<ul style="list-style-type: none"> • self-knowledge – abilities, interests, strengths / weaknesses • self-esteem – emotional attitude to one's own person and assessment of individual components of self-knowledge 	<p>Internal compatibility: Cronbach's alpha = 0.90</p> <p>Analysis of intergroup differences (group of students at risk of social maladjustment and a group of students without this type of difficulty) $p < 0.001$</p>	<p>Satisfying the need for competence focused on own resources, abilities and predispositions by creating in the educational environment as many opportunities as possible to recognise oneself in various task and social situations</p> <p><i>Example: Teachers enrich activities with self-reflection and self-evaluation of students. They create a wide field of exploration of topics and issues so that every student can find something for him/herself.</i></p>
S – sense of agency	<ul style="list-style-type: none"> • readiness to deal with problems • confirming about the usefulness of owned resources • confidence about the internal location of the control 	<p>Internal compatibility: Cronbach's alpha = 0.91</p> <p>Scale correlations with test results measuring similar components from 0.21 to 0.39</p>	<p>Satisfying the need for students' competence and autonomy by creating challenges in the educational environment to the best of the subject's ability, with her/his clear involvement in forming these challenges</p> <p><i>Example: The teacher designs multi-level tasks that enable each student to solve the problem on several levels. The educational goals of the activities are supported by references to life practice (e.g. application of chemistry knowledge to care for one's own health)</i></p>
KA – affect control	<ul style="list-style-type: none"> • range of emotional and social competences, regulating the relationship of the subject with the environment – scale to be 	<p>Internal compatibility: Cronbach's alpha = 0.73</p> <p>Stability of the test (correlation of test-retest results): $r = 0.87$</p>	<p>Since the scale consists of the strongest items of each scales above, it applies to all aspects of</p>

(Continued)

Table 1. Continued.

Scale/ competence	Dimensions of competence	Psychometric properties of the scale	An environment conducive to the development of a given competence – relationships with SDT
	assessed in the 270-degree model (student, parent, teacher) created from the items with the best psychometric parameters from the TROS scales	Analysis of intergroup differences (group of students at risk of social maladjustment and a group of students without this type of difficulty) $p < 0.001$	the environmental impacts mentioned in them

Source: Based on Domagała-Zyśk, Knopik, and Oszwa (2017).

with difficulties (T scale); (b) social relations (R scale); (c) self-image (scale O); (d) sense of agency (S scale); and (e) affect control (KA scale).

From the letters defining individual competences in Polish, an acronym was created – the name of the TROS-KA package (additionally: *troska* means *care* in Polish, which is related to the care for the students’ holistic development). A detailed description of individual competences, scales, their psychometrics and their relation with SDT has been provided in Table 1.

Method

The subjects

The study was conducted in the test – retest (assessment of the effectiveness of the methodological actions taken in the study) model using the TROS-KA assessment battery between September 2017 and June 2018 among five fifth grades (the Polish primary school consists of eight levels) in four primary schools (two municipal schools, two rural schools). In total, 94 students (including 48 girls and 46 boys) aged 10–11 years and their 28 teachers (including 5 class tutors) were involved in the study. All students from each chosen class took part in the study after obtaining parental and students’ consents. The selection of schools was random, taking into account the area of two voivodships in south-eastern Poland. After drawing the school from the educational information system, the study organisers sent a letter to the management describing the planned longitudinal studies and a proposal for cooperation. After obtaining the approval of the management, the activities were carried out according to the procedure described below. It should be added that four schools (out of nine drawn) did not agree to participate in the study.

Procedure

The longitudinal study took place in four stages: (1) training for teachers and parents, (2) first assessment of the current development of students’ emotional and social competences (test), (3) activities and education run by the trained teachers among the students’, based on prepared scenarios on SDT assumptions, (4) second assessment of students’ emotional and social competences (retest).

(1) Training for teachers and parents

Due to the fact that the most important stage of the study was appropriate, i.e. in accordance with the SDT assumptions, the organisation of a methodological workshop by teachers, largely different from the one used hitherto, a cycle of 24 h (in total) training was included in the procedure. Its goal was to present to the teachers-participants the SDT assumptions and its application values in school pragmatics. In accordance with the concept of SDT, the authors of the study adopted the assumption that the key factor evoking the involvement of teachers will be to meet their need for competence in the field of implemented innovation. After a detailed discussion of the theory,

teachers were acquainted with the didactic materials (65 course scenarios and 26 scenarios for games and plays with examples of how to implement the SDT concept in specific subjects: Polish language, mathematics, history, ethics, physical education). In conclusion, the teachers shared their doubts and comments regarding materials and the SDT concept itself. The workshop leaders together with participants developed detailed strategies to deal with the difficulties pointed out by teachers. Mentoring assistance was offered at every stage of the study.

In parallel, two meetings were held with students' parents. They have been presented the study plan and the potential benefits that students can gain from participating in the project. Selected ways of implementing SDT assumptions in the home environment were discussed (e.g. ways of spending free time, making decisions in the family, planning joint activities, daily communication). The key was to rise among both teachers and parents the genuine belief that the implementation of SDT concept into school practice makes sense and can contribute to optimising the functioning of students at school and at their homes. This gave the chance to treat SDT not as another teaching strategy, but as a holistic philosophy of student development in a favourable school and out-of-school environment (Liu, Wang, and Ryan 2016).

During the training, teachers reported potential challenges in the implementation of SDT at school: (a) the need for more flexible approach to the implementation of school activities and departing from the scenario; (b) the risk of lack of time to implement substantive issues related to the core curriculum; (c) the difficulty of adapting the assessment system to the SDT concept; (d) too much additional work involved in implementing SDT (e.g. alternative methods of checking knowledge).

Experts conducting the meetings recommended specific strategies for dealing with reported concerns. During the meetings with parents, consent was obtained for students to participate in the study, and its ethical aspects were discussed. Teachers and school specialists (psychologists, speech therapists, school pedagogues), parents and researchers have jointly developed a set of guidelines whose application minimised the risk of taking actions that violate the subjectivity and dignity of the respondents. Each student also gave consent for participation in the study. The study received substantive recommendation and ethical acceptance of the Education Development Centre (executive agenda of the Ministry of National Education). In order to completely anonymise research results, a secure computer application was created to collect data and generate reports. Participants were assured of providing feedback after the study. The above described activities aimed at minimising the risk of resigning from participation in the study during its duration (both students and teachers) proved to be effective and none of the participants decided to terminate their involvement (despite the formal possibility).

(2) First assessment of the current level of the students' emotional and social competences

During two meetings in groups of maximum five people (to maintain individual contact with them), the current level of emotional and social competences of the students was measured using the TROS-KA package. Additionally, parents ($n = 94$) and teachers ($n = 28$, including 5 educators) of these students assessed the development of emotional and social competences of students / children using the KA scale.

(3) Implementation of the activities based on prepared scenarios on the SDT concept

Teachers of these subjects carried out for 10 months classes based on the scenarios learned during the training. Own teachers materials were allowed to be used, providing they were directed at creating didactic situations, enabling students to satisfy three needs defined by SDT. Each scenario prepared by the teacher had to undergo an evaluation procedure (determining the degree of implementation of activities conducive to meeting three SDT universal needs). Tables 2–4 present selected examples of didactic solutions.

Table 2. Meeting the student's need for the autonomy – the examples of the strategies used in the study.

Need for autonomy	
SDT assumptions	Examples of implementation methods
Engaging students in decision-making processes	<ul style="list-style-type: none"> • Co-decision of students about the course of classes (form of learning, range of topics, method of checking knowledge, didactic means used) • Enabling temporary 'non-engagement' in classes (signalled by a jointly determined gesture/sign) • Opportunity to express opinions on current classes and expectations regarding future classes • Independent arrangement of space conducive to learning • Strengthening the role of student voting when making important class/ school decisions

Source: The study resources.

At the stage of preparation of class scenarios and during their implementation, teachers could count on the support of two mentors (one male, one female) – the didactic experts who assessed the adequacy of the proposed solutions. Their support activities were based on SDT assumptions – instead of providing ready-made solutions, they tried to create a space for independent teachers activity and thus strengthen their sense of competence. In addition, the study provided monitoring of didactic activities: two didactic experts (one male, one female) supervised at least once a month a teacher in a given class.

During the course of the project, the researchers obtained the opinions of teachers of all school subjects ($n = 28$) on the ongoing basis regarding the recommended materials and the effectiveness

Table 3. Meeting the student's need for the competence – the examples of the strategies used in the study.

Need for competence	
SDT assumptions	Examples of implementation methods
Tasks adapted to the students' abilities	<ul style="list-style-type: none"> • Multi-level task • Ability to choose exercises, work cards • Independent design of tasks based on the developed substantive material • Independent selection of the theme path during the class
Justification of topics undertaken during classes	<ul style="list-style-type: none"> • Combining teaching content with life pragmatics (opportunities to use it in everyday life) • Treating new knowledge and skills as opportunities to transgress own borders

Source: The study resources.

Table 4. Meeting the student's need for the relatedness – the examples of the strategies used in the study.

Need for relatedness	
SDT assumptions	Examples of implementation methods
Identification with a certain social group, e.g. through common goals to be realised	<ul style="list-style-type: none"> • Building the identity of the class as a team, not just a group of students (the patron of the class, motto, welcome song, gesture of greeting, battle cry, everyday rituals: greeting, farewell, birthday, the riddle of the day, day's mind, etc.) • Definition of common goals for implementation (what we learn today?; what would we like to achieve this week / month / year?; what do we have in common – passions, abilities, clothes, pets, etc.?) • Treating new knowledge and skills as a group's common property – a resource that differentiates it from other groups
Expressing kindness and interest	<ul style="list-style-type: none"> • Mutual kindness (letters to a friend, letters to the teacher, letters to students, letters to parents, diary of good deeds, minute of 'beautiful words') • Descriptive assessment balancing the student's strengths and areas for development • Planning to broaden the discussed topic according to student interest pathways

Source: The study resources.

of applying SDT assumptions in educational practice. It is worthy to mention that with the progress in the SDT implementation, the number of critical remarks and reported difficulties has been decreasing significantly. At the end of the study, the teachers emphasised the greater effectiveness of the undertaken actions both in the area of developing emotional and social competences, as well as cognitive development of the students participating in the project (Table 8). At the same time, they indicated that the materials should take more into account students with SEN and there should be more of them so that they exhaust at least half of the issues from the core curriculum.

(4) Second assessment of students' emotional and social competences

After 10 months (the whole school year duration), the current level of development of students' emotional and social competences was measured again using the following scales: T, R, O, S. Parents and a teachers, who were examined using the KA scale, also took part in this phase of the study.

Data analysis

The results obtained by students in the scope of individual emotional and social competences included in the TROS-KA model are presented in Table 5. The data relate to two measurements: at the beginning of the fifth grade (test) and at its end (retest).

An analysis of the significance of the differences between the results obtained by the respondents at the beginning of the school year and at its end shows that in each of the TROS areas students achieved a significant increase in competence ($p < 0.001$).

Similarly, the assessment of the degree of development of emotional and social competences of the students made by teachers and parents indicates the decisive progress of the respondents in the field of KA – identifying the degree of general emotional and social maturity ($p < 0.001$).

When analysing the results obtained, it is worth taking into account the findings from the standardisation of the tool showing that between the fifth and sixth grade students the average increase in emotional and social competences measured using the TROS-KA scales expressed in raw results ranged between 0.1 and 2 points. This indicates slight developmental differences in this area. There were no classes strengthening emotional and social competences in the standardisation group. Only the measurement of competences was used in the test-retest paradigm. Thus, it can be concluded that the increase in TROS competences observed in the study was due to special educational activities based on SDT assumptions.

The level of significance of the differences between the average grades in the fourth grade (preceding the class in which the test was conducted) and the grades in the first and second term of the fifth grade was also analysed. Already after one term of conducting classes based on the provided SDT didactic materials, a significant increase in students' level of performance was noted (average: 4.28 – increase by 0.1). The average of grades obtained in the second term was already 0.17 higher than the average at the end of the fourth grade (see Table 6). The observed differences were all statistically significant (Table 7).

Table 5. Test – retest measurement of emotional and social competences of the students ($n = 94$) and the significance of the differences.

TEST measured indicator	Mean	Standard deviation	RETEST measured indicator	Mean	Standard deviation	Z (Wilcoxon's)	p
T	49,46	11,70	T2	55,15	10,89	-7,981	<0,001
R	49,03	10,62	R2	58,27	10,70	-8,143	<0,001
O	53,23	10,32	O2	58,27	10,94	-7,596	<0,001
S	54,13	10,61	S2	59,43	11,23	-7,083	<0,001
KA(N)	49,12	10,79	KA(N)2	54,29	10,55	-7,671	<0,001
KA(R)	51,10	10,32	KA(R)2	57,49	10,39	-7,678	<0,001

Source: The study resources.

Table 6. The average school achievements of the students in three periods of their education.

Indicator of school achievements	Mean	Standard deviation
The end of the 4th grade average marks	4,18	0,59
The first term of the 5th grade average marks	4,28	0,68
The second term of the 5th grade average marks	4,35	0,59

Source: The study resources.

Table 7. The significance of the differences in the students' school achievements (*T*-test for dependent samples).

Average school marks comparison	<i>t</i>	Df	<i>p</i>
The 4th grade – the first term of the 5th grade	–2,944	93	0,004
The 4th grade – the second term of the 5th grade	–11,195	93	0,001

Source: The study resources.

According to information obtained during the validation of the TROS-KA tool among fifth grade students not participating in special classes based on SDT assumptions, the average grade at the end of the school year decreased by 0.09 (Domagała-Zyśk, Knopik, and Oszwa 2017). This may indicate that the implementation of the school activities based on SDT assumptions is an effective support for students in the development of emotional and social skills, building a sense of competence in the TROS-KA model.

Discussion

The aim of the study was to check whether the teachers' implementation of SDT concept (care to meet the three fundamental students' needs: autonomy, competence and relatedness) to everyday school practice can contribute to the increase of emotional and social competences of students in each of the four analysed areas: dealing with difficulties (T), social relations (R), self-image (O), agency (S). The results of the study provided some evidence to support this assumptions.

The satisfaction of the students' needs defined by SDT and applied by the trained teachers in the study seems to favour higher school achievements, measured by average grades in each term. This suggests an increase in the effectiveness of the learning process in a favourable classroom and school climate (Orsini, Binnie, and Tricio 2018). According to the SDT assumptions, creating an environment focused on satisfying three basic needs: autonomy, competence and relatedness triggers and strengthens intrinsic motivation (understood as a sense of competence in the presented study), which is crucial in empowering the learning process. The students recognised the relationship between what is implemented within the content of the core curriculum with life pragmatics and their own identities. This results in compliance with preferred values, the adequacy of learning objectives with life goals, which translates into higher school achievements (Mageau et al. 2009; Niemiec and Ryan 2009).

The teachers' use of strategies to directly involve students in the planning and implementation of class activities seems to allow the students to take over responsibility for their learning process, so that activities undertaken at school cease to be seen as mandatory, but as a result of personal decision (Chall 2000). This is evidenced by the changes in students' behaviours in the opinions of teachers and parents (Tables 8 and 9). Most often, both groups mentioned the increase in students' involvement in the learning process and the interiorisation of learning objectives.

The implementation of SDT into Polish education seems to create an opportunity to change the learning model, i.e. the transition from transmission teaching to a constructivist approach, in which the students become entities co-creating knowledge, based on their own judgments and current colloquial information. An important aspect of the changes implemented in the school environment is convincing the staff to make them according to SDT. When the teachers realise a sense of the implemented strategies, they are more willing to take over responsibility for these modifications.

Table 8. The examples of the changes in the students' behaviours after one year of participation in the study based on SDT assumptions – the teachers' opinions.

The description of changes in behaviours	The number of indications ^a
The increased student involvement in class work (<i>e.g. I finally feel that they are fully present; they seems to understand that the lesson was theirs</i>)	24 (85,71%)
The Increasing awareness of the role of acquired knowledge in life outside of school (<i>e.g. I think they began to appreciate the use of biology in their lives, they feel that this applies to them</i>)	18 (64,29%)
The greater social integration among students (<i>e.g. classroom communication has improved, students more often seem to seek agreement instead of escalating conflicts</i>)	15 (53,57%)
The growing importance of interests and passions in learning (<i>e.g. They seem to look for relationships between what they learn and their interests</i>)	11 (39,29%)
The increased emotional resistance to failure (<i>e.g. They look like they do not get discouraged when something goes wrong; they seem to try to learn from their mistakes</i>)	10 (35,71%)
Increase of self-knowledge (<i>e.g. More often they refer to their competences, strengths and deficits; they seem to be more aware of their own resources</i>).	8 (28,57%)

^aTeachers indicated in their description more than one change, hence the sum>28.

Source: The study resources.

In this approach, SDT can be seen as a process of empowering teachers according to the empowerment model (Lawson 2004).

The tutors participating in the study emphasised that the curriculum implemented by them based on the SDT assumptions enabled students to be the authors of their own learning process due to their involvement in planning and decision-making activities, and put the teachers themselves as active observers rather than directing the course of classes based on for rigid guidelines received from the principals. The advantage of the study was organising the methodological materials and giving teachers appropriate support during their implementation. In compliance with the study of Hyungshim, Johnmarshall, and Deci (2010) results, the presented study seems to indicate that autonomy support and structure were positively correlated and autonomy support and structure both predicted students' behavioural engagement.

The presented study seems to show that the implementation of the SDT concept creates opportunity to shape behaviours of a relatively persistent attitude (consistency between behaviours at school and outside). This was evidenced by the results obtained from teachers and parents on the KA scale (N) and the KA scale (R) in test and retest stage of the study (Table 5). The assessment of emotional and social competences of the students done by both teachers and parents surveyed after a year of participation of students in the support programme increased significantly. Qualitative

Table 9. The examples of the changes in the students' behaviours after one year of participation in the study based on SDT assumptions – the parents' opinions.

The description of changes in behaviours	The number of indications ^a
Greater independence and initiative in completing school-related tasks as well as after-school activities (<i>e.g. Now I don't have to remind her constantly about homework and tests. She learns a lot more and more willingly, because she claims that everything will be useful in her life</i>)	41 (43,61%)
Greater concern for the relationships with peers and loved ones (family) (<i>e.g. He constantly asks me how he can help me at home. Before he rather avoided meeting colleagues after school, and now they play together more often and they run field projects in a group</i>)	28 (29,79%)
Higher self-confidence (<i>e.g. He doesn't give up so quickly, at least he tries a few times before he will give up</i>)	26 (27,66%)
The need for justification of undertaken decisions /actions (<i>e.g. It's not easy with her! She keeps asking: what for? What is the point?</i>)	21 (22,34%)
Constantly talking about plans for the future. (<i>e.g. He thinks of school in a different way, rather as a career pass than a place to be</i>)	14 (14,89%)
The increased importance of passion in life (<i>e.g. She is absorbed by a lot of new things</i>)	13 (13,83%)

^aParents indicated in their description more than one change, hence the sum> 94.

Source: The study resources.

descriptions of changes in the behaviour of the students obtained from their teachers and parents are given in [Tables 8](#) and [9](#).

At the same time, the learning objectives contained in the core curriculum were successfully achieved. Furthermore, these goals have been included in more complex and long-term strategies for self-development, so the activities carried out at school have gained a global lifelong perspective, as evidenced by the similar observations completed by the teachers and parents ([Tables 8](#) and [9](#)). This may indicate the transferable nature of developed emotional and social competences.

Emotional and social competences allowing for constructive shaping of the students' relationships with the world. They could be recognised as one of the most crucial transferable resources. They can be effectively developed in a properly organised school context. The highest increase occurred in the area of social relations (R scale). It is important to base these activities on creating a team and not in a random group connected ad hoc only by the purpose of the task itself.

These conclusions are consistent with the studies of Niemiec and Ryan (2009), indicating the key role of satisfying the need to belong in the internalisation of the principles and requirements, related to learning and increasing intrinsic motivation. A student who has a sense of relationship with other students and receives support from a teacher deals more effectively with difficulties and undertakes active problem solving strategies (Gaudreau 2016; Reeve and Jang 2006).

Practical implementations

The results of the presented study can be used by teachers when designing educational classes, focused on both the implementation of the core curriculum (within individual subjects) and the development of students' emotional and social competences. This is particularly important in relation to the attitudes of Polish teachers who treat the implementation of the core curriculum and the development of emotional and social competences as if in opposition (either-or). The study results seem to indicate that it is possible to combine these two goals.

It was pointed out that an important condition for implementing change in a given organisation is the solidarity of work of all its members, aimed at achieving a common goal, in contrast to the selective, individual actions of individual persons who do not have support in the activities of their colleagues. Therefore, the key stage of the procedure in the presented study was to convince all teachers from the chosen schools to implement the changes. Specifically design and provided materials, which were then issued by the Centre for Education Development, an agenda of the Ministry of National Education, were distributed on the basis of the open resources. They were exemplary solutions conducive to creating a school environment optimal for the development of students' emotional and social competences. This allows to hope that the proposed practices will be included in the mainstream, eventually.

The presented proposals positively validated in this longitudinal study could be perceived as part of the paradigm of effective evidence-based education (Mitchell 2014). At the same time, they encourage schools and educational institutions to the special care to undertake active cooperation with the parents of students so that the activities carried out at school and at home could be complementary and as much as possible provide an opportunity to meet the students' universal needs. This serves both their emotional and social development as well as raising their satisfaction from participating in the education process. The results of this socio-cultural study may also indicate potential changes that can be implemented by incorporating SDT into Polish educational pragmatics across the country. The increase in intrinsic motivation and the development of a sense of competence in the individual dimension are processes that can significantly reduce *homo sovieticus* scripts still present in the Polish mentality.

Limitations and further research

Due to the limited size of the study sample, great care should be taken in formulating general conclusions.

Certainly, the fact that the chosen schools (after prior random selection) accepted the invitation to the study should be considered as an indicator of openness to changes in a organisational culture. This was conducive to the effective implementation of the SDT principles and the immediate benefit of it by the students themselves, as demonstrated by the increase in their emotional and social competences. It would be interesting to confront the effects in the implementation of SDT by schools open to change (and therefore also more autonomous) with conservative, authoritarian schools, strongly subordinated to formal orders and norms of educational law with low emancipation potential.

Although no control group was included directly in the study procedure, the data obtained during the tool validation procedure conducted in a group of 324 fifth grade students are a useful base for comparative analyses and allow to assess to what extent the observed changes were the result of implemented methodological modifications, and how much the effect of natural developmental increase (Domagała-Zyśk, Knopik, and Oszwa 2017).

Conclusions

The presented study results seem to suggest that organising a teacher's methodical workshop in accordance with the SDT assumptions might positively affect the development of students' emotional and social competences, such as coping with difficulties, self-image, constructive social relationships and a sense of agency. Because of the variety of contexts for their use, these competences might be considered as the transferable resources. This is consistent with numerous reports from studies on the role of the environment and group climate in achieving emotional maturity for children and youth (Jones and Bouffard 2012; Matczak 2008; Pahl and Barrett 2007).

The study results also suggest that the organisation of the education and upbringing process based on the SDT model might foster higher school achievements of students due to the creation of the optimal learning environment. Involving students in planning the didactic process increases their engagement and allows them to take responsibility for their own learning. The highest increase in grades was related to the second term of the school year in conducting study, which confirms the effectiveness of implemented strategies in relation to the time of implementation. Moreover, the presented study seems to provide an argument in favour of not treating the implementation of the core curriculum and developing the emotional and social competences of students as mutually exclusive or alternative activities (either one or the other).

In the referred study, both teachers and parents assessed the emotional and social competences of the children as higher after the year of the project compared to their initial measurement. The observed changes in students behaviours did not only apply to school activities, but also appeared in the non-school environment. In this sense, SDT seems to contribute to the transfer of competences acquired at school to everyday life pragmatics but it might need further investigation to support this statement.

The completed study suggests a way in which the transmission teaching model can be changed. Sadly to say, although anachronistic, it can still be observed as present in Polish educational reality. The SDT model does not exhaust the strength of its impact only in the organisation of teaching. It can also shape the mentality and attitudes of Polish citizens who, stuck in the culture of postmodernity, still cannot get rid of the thought and action habits, characteristic for *homo sovieticus*.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

Chall, J. S. 2000. *The Academic Achievement Challenge: What Really Works in the Classroom?* New York: Guilford Press.

- Cheon, S. H., J. Reeve, Y. Lee, N. Ntoumanis, N. Gillet, B. R. Kim, and Y.-G. Song. 2019. "Expanding Autonomy Psychological Need States from Two (Satisfaction, Frustration) to Three (Dissatisfaction): A Classroom-based Intervention Study." *Journal of Educational Psychology* 111: 685–702.
- Deci, E., and R. Ryan. 1985. *Intrinsic Motivation and Self-determination in Human Behavior*. New York, NY: Plenum.
- Deci, E., R. Vallerand, L. Pelletier, and R. Ryan. 1991. "Motivation and Education: The Self-determination Perspective." *Educational Psychologist* 26 (3): 325–346.
- De Naeghel, J., M. Valcke, I. De Meyer, N. Warlop, J. van Braak, and H. Van Keer. 2014. "The Role of Teacher Behavior in Adolescents' Intrinsic Reading Motivation." *Reading and Writing* 27: 1547–1565.
- Domagała-Zyśk, E., T. Knopik, and U. Osza. 2017. *Diagnoza funkcjonalna rozwoju społeczno-emocjonalnego uczniów w wieku 9-13 lat*. Warszawa: ORE.
- Dylak, D. 2000. *Wprowadzenie do konstruowania szkolnych programów nauczania*. Warszawa: PWN.
- Dylak, S. 2013. *Architektura wiedzy w szkole*. Warszawa: Difin.
- Erikson, E. 2004. *Tożsamość a cykl życia (Identity and the Life Cycle)*. Poznań: Zysk i S-ka.
- EURYDICE. 2008. *Levels of Autonomy and Responsibilities of Teachers in Europe*. Brussels: Eurydice.
- Federowicz, M. i in. 2013. *Czas pracy i warunki pracy w relacjach nauczycieli*. Warszawa: IBE.
- Foucalt, M. 2009. *Nadzorować i karać*. Warszawa: Wydawnictwo Fundacji Aletheia.
- Gaudreau, J. 2016. "Adolescents' Motivational Support in School: A Self Determination Theory Perspective." *Canadian Journal for New Scholars in Education* 7 (2): 27–36.
- Guay, F., C. Ratelle, S. Larose, R. J. Vallerand, and F. Vitaro. 2013. "The Number of Autonomy-supportive Relationships: Are More Relationships Better for Motivation, Perceived Competence, and Achievement?" *Contemporary Educational Psychology* 38: 375–382.
- Heidegger, M. 2004. *Bycie i czas*. Warszawa: PWN.
- Hyunghshim, J., R. Johnmarshall, and E. L. Deci. 2010. "Engaging Students in Learning Activities: It Is Not Autonomy Support or Structure but Autonomy Support and Structure." *Journal of Educational Psychology* 102 (3): 588–600.
- Jang, H., E. J. Kim, and J. Reeve. 2012. "Longitudinal Test of Self-determination Theory's Motivation Mediation Model in a Naturally Occurring Classroom Context." *Journal of Educational Psychology* 104 (4): 1175–1188.
- Jones, S., and S. Bouffard. 2012. "Social and Emotional Learning in Schools: From Programs to Strategies and Commentaries." *Social Policy Report* 26 (4): 1–33.
- Klus-Stańska, D. 2010. *Dydaktyka wobec chaosu pojęć i zdarzeń*. Warszawa: Wydawnictwo Akademickie "Żak".
- Klus-Stańska, D. 2012. "Wiedza, która zniewala." *Forum Oświatowe* 1 (45): 21–40.
- Lawson, L. 2004. "Teacher Autonomy: Power or Control?" *Education* 3: 3–18. doi:10.1080/03004270485200261.
- Litalien, D., A. Morin, M. Gagné, R. J. Vallerand, G. F. Losier, and R. M. Ryan. 2017. "Evidence of a Continuum Structure of Academic Self-determination: A Two-study Test Using a Bifactor-ESEM Representation of Academic Motivation." *Contemporary Educational Psychology* 51: 67–82.
- Liu, W. C., C. K. Wang, and R. M. Ryan. 2016. *Building Autonomous Learners: Perspectives from Research and Practice Using Self-determination Theory*. New York: Springer.
- Lo, C. O., M. Porath, H.-P. Yu, C.-M. Chen, K.-F. Tsai, and I.-C. Wu. 2019. "Giftedness in the Making: A Transactional Perspective." *Gifted Child Quarterly* 63 (3): 172–184.
- Lüftenegger, M., B. Schober, R. Van de Schoot, P. Wagner, M. Finsterwald, and C. Spiel. 2012. "Lifelong Learning as a Goal - Do Autonomy and Self-regulation in School Result in Well Prepared Pupils?" *Learning and Instruction* 22: 27–36.
- Mageau, G. A., R. J. Vallerand, J. Charest, S. J. Salvy, N. Lacaille, T. Bouffard, and R. Koestner. 2009. "On the Development of Harmonious and Obsessive Passion: The Role of Autonomy Support, Activity Specialization, and Identification with the Activity." *Journal of Personality* 77 (3): 601–646.
- Matczak, A. 2008. "Do czego może być potrzebne pojęcie inteligencji emocjonalnej?" *W: Inteligencja emocjonalna. Fakty, mity, kontrowersje*, red. M. Śmieja and J. Orzechowski, 46–61. Warszawa: Wydawnictwo Naukowe PWN.
- Mitchell, D. 2014. *What Really Works in Special and Inclusive Education: Using Evidence-based Teaching Strategies*. 2nd ed. Abingdon: Routledge.
- Nguyen, T., and E. Deci. 2016. "Can It Be Good to Set the Bar High? The Role of Motivational Regulation in Moderating the Link from High Standards to Academic Well-being." *Learning and Individual Differences* 45: 245–251.
- Niemiec, C., and R. Ryan. 2009. "Autonomy, Competence and Relatedness in the Classroom. Applying Self-determination Theory to Educational Practice." *Theory and Research in Education* 7 (2): 133–144. doi:10.1177/1477878509104318.
- Nowak-Dziemianowicz, M. 2014. *Oblicza edukacji: między pozorami a refleksyjną zmianą*. Wrocław: Dolnośląska Szkoła Wyższa.
- Núñez, J., and J. León. 2015. "Autonomy Support in the Classroom A Review From Self-determination Theory." *European Psychologist* 20: 275–283.
- Orsini, C., V. Binnie, and J. Tricio. 2018. "Motivational Profiles and Their Relationship with Basic Psychological Needs, Academic Performance, Study Strategies, Self-esteem, and Vitality in Dental Students in Chile." *Journal of Educational Evaluation for Health Professions* 15: 11. doi:10.3352/jeehp.2018.15.11.
- Pahl, K., and P. Barrett. 2007. "The Development of Social- Emotional Competence in Preschool-aged Children: An Introduction to the Fun FRIENDS Program." *Australian Journal of Guidance and Counselling* 17. doi:10.1375/ajgc.17.1.81.

- Pelletier, L. G., C. Séguin-Lévesque, and L. Legault. 2002. "Pressure from above and Pressure from Below as Determinants of Teachers' Motivation and Teaching Behaviors." *Journal of Educational Psychology* 94: 186–196.
- Reeve, J. 2006. "Teachers as Facilitators: What Autonomy-Supportive Teachers Do and Why their Students Benefit." *The Elementary School Journal* 106 (3): 225–236.
- Reeve, J., and H. Jang. 2006. "What Teachers Say and Do to Support Students' Autonomy during a Learning Activity." *Journal of Educational Psychology* 98 (1): 209–218.
- Roth, G., A. Assor, Y. Kanat-Maymon, and H. Kaplan. 2007. "Autonomous Motivation for Teaching: How Self-determined Teaching May Lead to Self Determined Learning." *Journal of Educational Psychology* 99: 761–774.
- Rubacha, K. 2000. *Pelnienie roli nauczyciela a realizacja zadań rozwojowych w okresie wczesnej dorosłości*. Toruń: Wydawnictwo UMK.
- Ryan, R. M., and E. L. Deci. 2011. "A Self-determination Theory Perspective on Social, Institutional, Cultural, and Economic Supports for Autonomy and Their Importance for Well-being." In *Cross-cultural Advancements in Positive Psychology: Vol. 1. Human Autonomy in Cross-cultural Context: Perspectives on the Psychology of Agency, Freedom, and Well-being*, edited by V. I. Chirkov, R. M. Ryan, and K. M. Sheldon, 45–64. New York, NY: Springer Science + Business Media.
- Ryan, R., and E. Deci. 2017. *Self-determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York: The Guilford Press.
- Ryan, R. M., and E. L. Deci. 2019. "Brick by Brick: The Origins, Development, and Future of Self-determination Theory." In *Brick by Brick: The Origins, Development, and Future of Self-determination Theory*. Vol. 6, edited by A. J. Elliot, 111–156. Cambridge, MA: Elsevier.
- Ryan, R., M. Soenens, and M. Vansteenkiste. 2019. "Reflections on Self-Determination Theory as an Organizing Framework for Personality Psychology: Interfaces, Integrations, Issues, and Unfinished Business." *Journal of Personality* 87 (1): 115–145.
- Śliwowski, B. 2016. "Kryzys oświatowej demokracji w świetle makropolitycznych badań pedagogicznych." *Przegląd Pedagogiczny* 2: 313–322.
- Sternberg, R. 2005. "The Theory of Successful Intelligence." *Interamerican Journal of Psychology* 39 (2): 189–120.
- Taylor, G., T. Jungert, G. A. Mageau, K. Schattke, H. Dedic, S. Rosenfield, and R. Koestner. 2014. "A Self-determination Theory Approach to Predicting School Achievement Over Time: the Unique Role of Intrinsic Motivation." *Contemporary Educational Psychology* 39 (4): 342–358.
- Tischner, J. 2005. *Etyka solidarności oraz Homo sovieticus*. Kraków: Znak.
- Tomlinson, C. A. 2014. *The Differentiated Classroom: Responding to the Needs of All Learners*. 2nd ed. Alexandria, VA: Association for Supervision and Curriculum Development.
- Wang, C. K. 2017. "The Joy of Learning: What is It and How to Achieve It." *Exchange* 1: 7–11.