

## **Capturing Educational Change in Conceptual Metaphors. Implications for Teacher Education**

**Teresa SIEK-PISKOZUB \***  
**Ariadna STRUGIELSKA\*\***

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**Abstract:** Since the 1990s Poland has launched major changes into its socio-political and educational systems. Our goal is to investigate the impact this may have had upon learners' and teachers' educational concepts. Employing guidelines offered by Conceptual Metaphor Theory (CMT), data were collected from English as a foreign language (EFL) teachers and learners and classified according to coherence patterns. The data from both groups reveal a dynamic character of the concepts in question. The stage of ontogenetic development (i.e. time of entering the learning/teaching system) influences the static/dynamic character of educational metaphors. This questions validity of claims treating metaphors as static signs rather than dynamic sign-processes. Via an inductive approach to CMT, one can capture conceptual changes within individuals, whether learners or teachers, which may serve teacher education.

**Keywords:** conceptual metaphor, educational discourse, data-driven approach

## **Introduction**

The 90s were a time of major socio-political changes in Poland which brought about a change in the educational paradigm (see e.g. Siek-Piskozub et al., 2008). This confirms Caine and Caine's (1997) observation about the co-evolution of societies and educational systems. The positivist concept of a formal, transmitting, applied science model of education at all educational levels has recently been transformed into a humanistic model under the influence of the social-constructivist paradigm, with emphasis on learner autonomy, experiential learning and functional knowledge. This is reflected, for example, in Polish core-curricula for all school subjects. The question arises to what extent the change is being implemented in the 'real' school context. Fisiak (1994:7) warned that "transferring educational innovations from one system to another is easy to initiate but difficult to carry out successfully". Thus, the goal of our research is to capture evidence of the educational change in the concepts of learner/teacher/classroom as reflected in metaphors of EFL teachers and learners. In the article we report on two cross-sectional studies: one undertaken among teachers of different expertise studying in postgraduate EFL teachers' programmes; the other involved three consecutive generations of undergraduate students from the English Department of Nicolaus Copernicus University in Toruń. Concepts of education as reflected in metaphors by the two groups of subjects were analysed for internal congruence within a subject. Comparison of learners' and teachers' perspectives serves the purpose of triangulation. We employed methodological guidelines offered by CMT. However, unlike many researchers in the field of CMT (e.g. Cortazzi and Jin 1999, Lakoff and Johnson 2003, Stanulewicz 2009), we do not view metaphors as static signs but as dynamic systems. In our article we will first evaluate the static sign view on metaphors and contrast it with the data-driven dynamic sign-processes approach. The latter will be chosen for the reported two studies aiming at capturing educational change in Poland.

Analysis of conceptual metaphors was initiated by Lakoff and Johnson (1980: 5) who note that metaphor pervades everyday language as well as human thoughts and actions.<sup>1</sup> The nature of its mechanism is to capture and convey a typically more abstract concept in terms of another, which is directly emergent. By establishing a set of correspondences between the two domains involved we can achieve metaphorical understanding. With the advent of cognitive linguistics it has become clear that many important areas of human cognition are so abstract that they can be only conceptualised metaphorically (see e.g. Lakoff 1987). Researchers in many domains resort to a conceptual metaphor approach to explore domain specific discourses, e.g. political (Lakoff 1996), emotional (Kövecses 1986, 2000) and educational (de Guerrero and Villamil 2002, Holme 2004); the latter is of our present concern.

The early studies of metaphors in education treated them as static. It was postulated that conceptual metaphors are static within a community as they are closely tied to the cultural and social milieu in which they operate. According to Lakoff and Johnson (1980:142) conventional metaphors define a particular socio-cultural status quo and are evidenced by metaphorical linguistic expressions, which testify to the validity of a given mapping between source and target domains. Yet as de Guerrero and Villamil (2002:99) observe, metaphor appropriation does not consist in merely copying the metaphorical units sanctioned by a particular community. Like the whole process of cognition, culturally shared metaphors are subject to fluctuation due to various personal experiences of individuals and the wide-ranging social discourses they are exposed to. Turner and Fauconnier (1995) propose a 'many-space' model that diverges from the traditional 'two-domain' model. Nevertheless, some researchers emphasise even cross-cultural universality of conceptual metaphors. For example, Cortazzi and Jin (1999: 175) note: "[t]here is a predominance of FRIEND and PARENT metaphors for teachers among the Chinese, Japanese, Lebanese and Turkish

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<sup>1</sup> Metaphor as one kind of analogy was recognised already by ancient philosophers (e.g. Aristotle), however the positivist criticism of figurative language deprived it of due attention (Ayer 1976 [1936]).

groups”. Cie licka (2002: 383-393) postulates that conventional metaphors are also static in terms of modality. She has analysed both written and spoken metaphors of Polish EFL students and found out that their metaphors were stable across the two modalities in bilingual English/Polish speakers. Many researchers note metaphor coherence in the educational domain. For example, Stanulewicz (2008: 71) quotes from her study a set of related metaphors: “... LEARNING IS A JOURNEY. ...THE TEACHER IS THE GUIDE. ..THE LEARNER IS A TRAVELER.”. In another work (Stanulewicz, 2009: 477 – 479) she reports coherence within up to 11 concepts related to the educational context. In the same vein, Dakowska (2005: 151) stipulates that the CLASSROOM AS A HOT HOUSE metaphor necessarily entails the images of the TEACHER AS A GARDENER and STUDENTS AS PLANTS.

The least studied area is metaphor stability within an individual which is a weakness of this approach. A fact observed by Cameron (2003:21) is that “[t]here is surprisingly little interest in the ontogenetic development of conceptual metaphor. Cognitive theory seems to posit individual minds as ready-formed adult thinkers, rather than as individuals whose minds develop through social interaction in particular sociocultural contexts”. Some studies (Siek-Piskozub and Strugielska, 2008a, b; Strugielska, 2008a, b; Strugielska and Siek-Piskozub, 2008) have evidenced that conceptual metaphors in the educational domain do not display ideal coherence relations, at least during the time of educational change, which is the case of the Polish system.

Analysing these early reports on metaphors in the educational context, one may conclude that there has been a predominately deductive approach in use, one based on the process of introspection applied by the researcher or educator to identify conceptual metaphors. W sik (1998: 17-18) refers to it as the “cognitive attitude approach”. As a result, perfect consistency is achieved. For example, Musiał (2002: 466), among others, suggests that the TEACHING IS CREATING metaphor functions as a superordinate metonym for the following manifestations:

*Teaching is (like) sculpting/ composing music/ carving wood.*

*Teacher is (like) sculptor.*

Another weakness of the static (cognitive attitude) approach is that the teaching/learning process is metonymically presented in terms of a conceptual model of teaching rather than of learning or classroom. We also agree with Haser (2009:50) that “[m]etaphors are not a matter of thought, but a matter of words. One’s analysis should proceed from and relate to linguistic expressions rather than general metaphorical and metonymical concepts”.

Many researchers (e.g. Cameron, 2003; Deignan, 2005; Goatly, 1997) note that conceptual metaphors are not sufficiently supported by real data. As a result, more and more authorities support the need to adopt a data- driven approach which, following W sik (1998), we associate with the “cognitive standpoint”.

Since the 1990s there has been a tendency in cognitive and social sciences to concentrate on dynamic cognitive systems in which there is a constant interplay between variables (e.g. Watson-Gegeo, 2004). We think that the system of education can be treated as a system which undergoes such dynamic change(s) as a result of interaction between all its variables. The development is non-linear; the system changes constantly either through internal self-organisation (e.g. new theories of education) or as a result of interaction with the environment (e.g. personal experience either as learners or as teacher-trainees). Thus, it is postulated that also educational conceptual metaphors are dynamic and evolving categories, sensitive to various factors, including the age of respondents, their level of expertise, as well as to the length of staying in the educational system. However, to justify this claim we need to obtain data from both teachers and learners who function in a given educational context.

Thus two cross-sectional studies were carried out to capture a possibly dynamic nature of conceptual metaphors in the Polish educational context. The two groups in question represented two variables of the educational system, namely Teacher variable (Study 1) and Learner variable (Study 2)

## **Methodology**

### **Subjects: Study 1 - Teacher variable**

76 students from three colleges: School of English at Adam Mickiewicz University in Poznań, Philological School of Higher Education in Wrocław, and Teacher Training College in Bydgoszcz, took part in our Study 1. All the subjects were in extramural English teacher training programmes either studying for BA or MA degrees. They varied in terms of teaching experience as some were already practising teachers while others were planning to become ones. For the sake of data analysis they were subdivided into three groups depending on the length of their teaching experience: Group 1: 37 beginning teacher trainees (almost) without previous experience in the profession (0-1 year), Group 2: 20 beginning teacher trainees with some experience in the profession (2-4 years), and Group 3: 19 teacher trainees with experience of teaching either English as a foreign language or some other school subjects (5-10 years). The different expertise of the subjects was hypothesised to make also a difference in the kind of metaphors they formulated and the level of metaphor congruence. It was anticipated that the longer one stayed in the educational system the more s/he was under the influence of the previous (positivist) concept of education, which would be reflected in metaphorical entailments. New concepts of teacher education were implemented at the beginning of 1990s via new teacher education programmes.

### **Subjects: Study 2 - Learner variable**

100 first year EFL learners from three groups, beginning their study in Nicolaus Copernicus University, participated in our Study 2: Group 1 were 24 students who began their academic education in the year 2005; Group 2 consisted of 36 learners in the year 2006; and Group 3 of the year 2007 involved 40 subjects. The year 2005 as the beginning for collecting data was chosen in order to observe the impact of earlier educational levels for conceptual metaphors formation. The new school curricula were introduced at the end of the 1990s.

## **The Instrument**

Subjects were provided with a questionnaire in which, apart from questions concerning their teaching/learning experiences, they were asked to complete the following sentences: *Teacher/ Learner/ Classroom is (like) .... because...* This exercise provided linguistic data describing the learners'/teachers' experiences reflected in their metaphor conceptualisations. Attention was paid to the respondents' comments, since it is via those additional remarks that respondents tended to convey the true meaning of the conceptual metaphors.

## **Data Analysis**

Our first step in the analysis was to make a list of the linguistic metaphors supplied by the participants of each of the groups in a given study. Next, for each study the collected data were analysed for internal coherence patterns between the three constructs (teacher/learner/classroom) and followed by a statistical analysis of different types of congruence.

## Findings

The findings of the two studies are presented separately for the two variables.

### 1. Coherence patterns in Teacher variable

The results of the study in terms of coherence patterns are of three kinds: (1) no coherence: (a) a clash between conceptual domains, e.g. *The teacher is (like) a guide; The learner is (like) a sponge; The classroom is (like) prison*; (b) lack of coherence between a target domain and the attribute, e.g. *The teacher is like a well because she/he transfers knowledge*; (2) partial coherence: e.g. *The teacher is (like) a parent; The learner is (like) a child; The classroom is (like) a church*; and (3) full coherence: e.g. *The teacher is (like) a guide; The learner is (like) a traveller; The classroom is (like) a bus*. Statistical analysis of each type of coherence is presented in Table 1.

Table 1. Statistical data for coherence patterns in three groups of teachers.

Coherence pattern	G1: 0-2 years experience	G2: 2-4 years experience	G3: 5-10 years experience
No coherence	15%	5%	2%
Partial coherence:			
<i>Teacher/classroom</i>	46%	36%	26%
<i>Teacher/learner</i>	27%	26%	17%
<i>Learner/classroom</i>	12%	15%	8%
Full coherence	-	18%	53%

### 2. Coherence patterns in Learner variable

As with the teacher-groups learner data could be arranged in three sections: (1) no coherence, e.g. *The teacher is like a miner; The learner is like a discoverer; The classroom is like a battlefield*; (2) partial coherence, e.g. *The teacher is like a TV; The learner is like a scientist; The classroom is like a lab*; and (3) full coherence, e.g. *The teacher is like a doctor; The learner is like a patient; The classroom is like a hospital*.

Metaphors provided by learners were often emotionally loaded, e.g. *Teacher is like an executioner because s/he tells you what to do; The teacher is like a guide because s/he organises interesting trips and provides useful comments*.

Statistical analysis of each type of coherence pattern is presented in Table 2.

Table 2. Statistical data for coherence patterns in three groups of learners.

Coherence pattern	G1: 2005	G2: 2006	G3: 2007
No coherence	19%	39%	24%
Partial coherence:			
<i>Teacher/classroom</i>	22%	13%	18%
<i>Teacher/learner</i>	32%	12%	28%
<i>Learner/classroom</i>	2%	28%	11%
Full coherence	25%	8%	19%

### Discussion and Conclusion

The main objective of the two reported studies was to identify the impact of the educational reform carried out in Poland on the nature of educational metaphors of teachers and learners. The data have shown polarisation of responses in the two groups of respondents revealing a dynamic character of the Polish educational system. Congruence of metaphorical concepts within an individual was rare in the teacher set and even rarer in the learner set. The longer a teacher functioned in the educational system the more congruent was the pattern of metaphors; however, the more congruent the patterns the more they were formed under the influence of the previous positivist paradigm. Their experience as learners and observation of practices of older teachers must have had a greater impact on them than the training which they had received during their studies. This is confirmed by observations of their mentors (e.g. K błowska, 2006, see also Siek-Piskozub et al., 2008: 84-86).

As concerns the learner-group, the later one entered the educational system, the more traits of the impact of the constructivist paradigm could be traced. The tendency was particularly clear with the latest secondary school graduates. Most probably, the numbers of newly educated teachers in schools had increased and as a result learners experienced new educational concepts more often; however, previous practices can still be seen, which often results in negative emotions on the part of learners (see also Siek-Piskozub and Strugielska, 2008b).

The data show that conceptual metaphors can help in screening an educational system for change; however, we recommend adopting a cognitive stand, i.e. a data-driven approach to data collection. We have found that the Polish educational system is in a transitional stage. The change is slow and often recursive (see e.g. Strzemeski and Strugielska, 2008) but can be captured by metaphors of both studied groups, i.e. teachers and learners. Full coherence, characteristic of expert models, is rare in the real context when the system undergoes a change. Moreover, consistency correlates with high conventionalisation of metaphors. Interestingly, more schematic metaphors are less telling about a construct in question (whether teacher, learner or classroom) than basic-level concepts, which is supported by both quantity and quality of linguistic entailments.

The CTM approach may be of use in teacher education. We postulate studying metaphors of prospective teachers at the beginning of a teacher training programme to raise

their self-awareness, and at the end of the programme to see its impact on the trainees' conceptualisations.

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#### Biodata

\* Prof. dr hab. Teresa Siek-Piskozub, Professor Ordinarius, head of the Department of English Applied Linguistics and English Didactics in the School of English, Adam University Mickiewicz in Poznań and the Philological School of Higher Education in Wrocław. Author of many articles and books on foreign language teaching and learning. Research interests in applied linguistics, psycholinguistics, theories of language learning and teaching. [Piskozub@amu.edu.pl](mailto:Piskozub@amu.edu.pl)

\*\* Dr. Ariadna Strugielska, Assistant Professor in the Department of English, Nicolaus Copernicus University in Toruń. Author of numerous articles on conceptual metaphors and their applicability. Research interests include cognitive grammar, conceptual metaphor theory, construction grammars as well as the relation between language and domains of discourse.

[Piesshaul@mai.us.uni.torun.pl](mailto:Piesshaul@mai.us.uni.torun.pl)