

Edu World 2016
7th International Conference

DIGITAL TEXTBOOKS – A FALSE STORY ABOUT REWARDS

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Abstract

In 2013, policymakers in Romania have suggested traditional textbooks (paper based) be replaced by digital textbooks; project began with primary education, and in 2014 publishers have released the first digital textbooks (for grades 1, 2 and 3). This study aims to discover the concepts conveyed (explicitly, but even more so implicitly) by digital textbooks of *communication in Romanian* regarding rewards and their influence on the mentalities and behaviours of children. Textbooks are one of the tools that *translate* the world (including abstractions) to the children's understanding, and the experiences they occasioned mark them for life. Hence we have considered the importance of analysing textbook's contents and their impact on students' education and formation. Therefore, after analyzing 17 textbooks and 380 texts, we found that authors ignore the implications of the texts they selected on children's personality formation and the relationship between external rewards and internal motivation of learners (children aged 7, 8 or 9) is ignored.

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Keywords: Digital handbook; digital natives; external rewards; conformism; internal motivation.

1. Introduction

Textbooks should encompass the world useful for children (referring to textbooks for primary education). School replaces children's direct experience with adult mediated learning and steps in when a child's direct, unmediated experience has exhausted the knowledge of the environment that is readily accessible to their senses: home, street, family, friends, toys, etc. Interaction with an extended universe brings them in contact with things and events that can no longer be understood (and used) empirically (by use of their senses. Now school (as specialized institution) and teacher (as the adult with teaching training) intervene between the child and the extended universe (referring to new things, but also to depth, to understanding abstractions). For reasons unclear (Because they are cheaper? Because they can be

upgraded at a lower cost? Because there is the necessary infrastructure? Etc.), responsible policy makers in Romania have decided (in 2013) to replace traditional textbooks (on paper) with digital textbooks. The project and the process of replacing traditional textbooks with digital ones began with textbooks for primary education (grades 1, 2 and 3). Later, it was found that statistics on the digital infrastructure covers a reality unable to bear such a project: although we have high-speed internet (4G) and national coverage is very high, in rural areas there is no available network; although the number of PCs, tablets and smartphones available at national level is very high, in rural areas or in the poor neighbourhoods of large cities their number is insufficient (European Commission, 2015, p. 1); at the same time, the government does not have the financial resources to create digital infrastructure support where it is lacking (therefore the intention to allocate fewer financial resources to education seems to be the main reason behind the textbook digitization project). We must acknowledge that digital textbooks seem to be the answer (be it partially) to the features of the *generation App* (or instant, or digital natives, or digital residents or homo zappiens, etc.). Gardner and Davis noted: „It’s our argument that young people growing up in our time are not only immersed in apps: they’ve come to think of the world as an ensemble of apps, to see their lives as a string of ordered apps, or perhaps, in many cases, a single, extended, cradle-to-grave app. (We’ve labelled this overarching app a “super-app.”)” (Gardner/Davis, 2013, p. 7-8) In a previous study (in press at this moment), we synthesized: „the peculiarities of the *App generation* are: connectivity, immersion, action, control, networking; if they get disconnected, pupils are taken out of their living environment and become apathetic, confused, non-participating”. From this perspective (of potential users – generation App) the digital textbooks are inadequate: they do not allow connection and teamwork, they do not allow immersion, control and active involvement of children) (we shall further develop the analysis of these issues in another study). As an intermediary between children and the world, textbooks (any type of textbooks, including digital ones) have an unpleasing task: to provide them relevant experiences for their age but that will also prove valuable for the adults they become; in other words, deliberate or spontaneous learning experiences must be exciting and useful now but they must also be meaningful and relevant later. Given these challenges, we intend to analyze how the child will contextually experience and the formative value of external rewards (the only ones encountered so far), by means of *Communication in Romanian textbooks* (it’s 17 textbooks, designed only for grades 1 and 2).

2. What Types of Reward Do Children Receive?

Generally, rewards consist of praise and (less often) objects, but they always follow a child’s behaviour considered desirable by adults; it appears that being a good child (the semantic ambiguity of the word stands) means to be declared as such by adults; also, being good means having a behaviour, an attitude etc. that will please adults. Textbooks convey a clear message, even if it is less obvious for children that read them: if you do what adults expect of you, they will consider you good children and will offer you rewards (we emphasized that the message is less clear for children as the danger lies in internalizing attitudes and behaviours in a non-critical, unreflected way); in textbook stories it very seldom happens for rewards, be they praise or desired objects to be offered to them by other children (persons of the same age), which implicitly strengthens the idea that rewards are owned by the powerful (adults, and later individuals in positions of authority), only to be offered to those who obey. The

behaviourism behind this concept is obvious: „The core of pop behaviourism is „*Do this and You'll get that.*” The wisdom of this technique is very rarely held up for inspection; all that is open to question is what exactly people will receive and under what circumstances it will be promised and delivered. We take for granted that this is the logical way to raise children, teach students, and manage employees.” (Kohn, 1993, p. 3) But the implications go deeper still; thus, *Self Determination Theory* (Deci and Ryan) demonstrated that the use of external rewards results in undermining internal motivation; in other words, if a child gets involved in an activity because they find it interesting (for pleasure), they will cease to practice that activity for sheer pleasure if they will receive a reward from an adult: „The initial finding of decreased intrinsic motivation for an interesting activity following the experience of being rewarded for doing it has been referred to as the *undermining effect* (Deci & Ryan, 1980; 1985b). The phenomenon was first demonstrated by Deci (1971), using monetary rewards with college students, and subsequently by Lepper, Greene, and Naisbett (1973), using symbolic rewards with preschool children. Following these studies, numerous experiments replicated and extended the finding and highlighted its limited conditions.” (Ryan & Deci, 2000, p. 17) It follows that the nature of the reward (symbolic, material, etc.) is irrelevant, all it counts is the way in which the child perceives it: if the message is rather objective, conveying information about the extent to which the child possesses a particular skill, the reward will not affect intrinsic motivation; if the message conveyed by rewards is authoritarian, controlling, the effect will be a drop in internal motivation; synthesizing, any reward that is perceived by children as affecting their autonomy and competence will undermine their internal motivation. Deci and Ryan found that: „Intrinsic motivation has emerged as an important phenomenon for educators—a natural wellspring of learning and achievement that can be systematically catalyzed or undermined by parent and teacher practices (Ryan & Stiller, 1991). Because intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces that engender versus undermine it.” (Ryan & Deci, 2000, p. 55) We note that internal motivation is undermined by external rewards only in case of attractive activities, those that involve creativity and are interesting for the child; from this perspective, our analysis finds a worrying fact: digital textbooks are compiled as routine activities, which only require the effort of children and not their interest and involvement; in terms of the reward types contained by the narrative in these textbooks, the texts may be grouped in four categories: external rewards in the traditional manner (specific to pop behaviourism), rewards that reinforce conformity and compliance, controversial rewards and rewards that do not affect internal motivation.

2.1. External Rewards in Traditional Manner (Specific to Pop Behaviorism)

Unfortunately, considering long term consequences, texts that reinforce the idea that a child is good if an adult finds them that way (by offering rewards) are the most numerous. Textbook authors started from the premise that a child of six, seven or eight years old cannot read and understand a longer text, which is why they selected excerpts from longer texts, fragments that thus acquire a meaning of their own other than the text from which they originated; for example, *Fata babei și fata moșneagului/ The Old Woman's Daughter and the Old Man's Daughter* (written by Ion Creangă) is a well-known story, from which textbooks have selected a fragment (to be found in almost all textbooks): „The old man's daughter was very beautiful. She always did good things. For her actions she has been rewarded with many gifts.”

(Dumitrescu/ Barbu, 2015, p. 15) Obviously the daughter of the old woman was lazy and mean, being punished for her greed. It follows that good deeds are rewarded and the bad are punished; that good deeds and bad deeds are decided upon by adults, and adults (parents and teachers) always know better; the default text idea is that people in positions of power are knowledgeable and the rest (those who know little) *must* listen to them. Such a context is found in the case of the text called *Puișorul și vulpea/ The fox and the little chicken* (written by Ion Pas): „Once upon a time there was a naughty little chicken. He wanted to go to the grove, although mother had explained that there lurks the ruthless fox.” (Mihăilescu/ Pițilă, 2014, p. 40) The setting of the text, by exercises and questions supporting the understanding of the narrative (What did mother advise the little chicken? Did the little chicken dismiss mother’s advice? Etc.) reinforces the fundamental idea that good deeds are followed by rewards and bad deeds are punished, in an obvious pop behaviorist manner. Referring to the reinforcement of the idea that good (rewards) is the result of good deeds, Kant noted: „But if a child is punished when it does something bad and rewarded when it does something good, then it does something good in order to be well off. Later when the child enters the world where things are different, where it can do something good without being rewarded and something bad without being punished, it will become a human being who cares only how it can get on well in the world and is good or bad depending on what it finds most conducive to that end.” (Kant, 2007, p. 468)

2.2 Rewards That Reinforce Conformity and Compliance

To Michel Foucault, disciplinary power is the one that softly imposes the acceptance of conformity by any new comer (Gert Biesta) to the adult world; in this sense, school is (only) one of the tools at the service of disciplinary power. To Michel Foucault, „The chief function of the disciplinary power is to <train>” (Foucault, 249), to sanction „non-observance, that which does not measure up to the rule, that departs from it.” (Foucault, 1997, 259) Even if the main dissemination channel of disciplinary power is the mass-media, school is still the main laboratory for the creation of compliant elites. If disciplinary power sanctions the ab-normal, then it mostly sanctions alterity, that which departs from the patterns of conformism; from this point of view, textbooks implicitly encourage (reward and reinforce) (we mean, without raising child’s awareness) compliance, adopting the norm, mentalities and behaviours of the community (that is another way of saying that what gets punished is the lack of compliance, ignoring rules, divergent behaviour and different features). In this regard, Zygmunt Bauman notes: „Each of us "infers" their own views about 'others' from sedimented memories, selected and processed, of meetings, connections, exchanges, joint actions or confrontations in the past.” (Bauman, 2000, p. 160) The „memories” that a textbook on communication in Romanian for the first grade of primary education “sediments” are related to, for example, the story of Hans Christian Andersen, *The Ugly Duckling*; the story is reduced to five images, each having one question below it: "What is the last hatchling like, as compared to its brothers?, Why does the ugly duckling cry?, What does it decide to do?, What becomes of the little duckling during the harsh winter?, Who becomes the fairest swan?" (Dobrescu, 2014, p. 5) The conclusion of this photographic montage is clear: if something looks different then it is different and needs to be marginalized (punished); if it complies, it can be re-integrated. The conclusion is also reinforced by *Povestea ursului cafeniu/ The story of the brown bear* (by Vladimir Colin); a brown bear

found himself 'in the world of polar ice', being despised and marginalized by seals and white bears (which do not recognize him as their brother); seeing how miserable he was, a penguin comes to the rescue: 'The Penguin brought him a bar of soap and made him lather. Soon, his fur turned white, and brightly so. The Penguin took him among the white bears. 'What a beautiful bear! Stay with us! cried the white bears' (Mihăiescu/ Pacearcă/ Dulman/ Alexeand Brebenel, 2014, p. 52) Penguin's help consisted in the (obviously temporary) elimination of the distinctive features of the brown bear, which emphasizes once again that acceptance in the community and implicit rewards (security, self-respect, etc.) provided by a group are conditional upon assuming the distinctive (outer) marks of the respective group. Cultivating social conformity and rejecting alterity result in blocking tolerance and critical thinking, even if authors of the analyzed textbooks did not intend it.

2.3 Controversial Rewards

Texts that fall into this category are confused in terms of a solid theory about the consequences of using external rewards; we exemplify with a text called *Sperietoarea/ The Scarecrow*, in the *Communicating in Romanian Textbook for First Graders* (the author of this text is not indicated, which means it belongs to the textbook authors) „Țicu loves cherries very much. Why is that? It's because they are very sweet, juicy and inviting. Birds travel long distances for them. They come all the way from the hot countries. But Țicu's a smart boy. He's found a life-saver solution. He put a scarecrow in the cherry tree. (...) Țicu's cherries are well guarded.” (Dumitrescu/ Barbu, 2014, p. 21) Cherries do not represent a reward for the migratory birds, even if they made a huge effort to get to them (they flew thousands of kilometres, on their way from the hot countries); instead, cherries will be a reward for the child, who did nothing more than prevent birds' access to food (not rewards). But the implications of the text in terms of mentalities contradict the effort of the teacher to cultivate what we (lately) call ecological intelligence (Daniel Goleman), ignores the need to reinforce responsible behaviour towards the needy and to care for the weak. The didactic scenario proposed by the textbook ignores the broader ethical-behaviourist context in limiting to the questions: 'Do you like cherries? Why?' (Dumitrescu/ Barbu, 2014, p. 21) Perhaps it is worth mentioning the diatribe of Konrad Lorenz against those who write stories with and about animals, without the minimal decency to do research on their behaviour and customs: „Anger against whom? Against the countless stories full of lies, with incredibly stupid animals, stories available in all bookstores nowadays; against the crowd of scribes who claim to write about animals when in fact they don't even know them.” (Lorenz, 2000, p. 9) Equally controversial is the text called *Cearța nu aduce niciun folos/ There's no benefit in an argument*, featured in the *Communicating in Romanian Textbook for Second Graders*; the text (taken from an *ABC* published in 1868) tells the story of two boys who found a walnut and began to quarrel about who's to be the owner: is it to belong to the one who saw it or to the one who picked it up. An older boy, passing by, 'solves' the problem: „And the boy, sitting in their midst, breaks the walnut open in half and says: 'This half shell goes to the one who saw the walnut first. The other half shell goes to the one who picked it up. But the core is mine because I made peace between you two. Then the boy went on laughing, and the boys remained with the shells in hand'.” (Goian/ Minchevici/ Preda, 2014, p. 14) The older boy acts improperly because the 'lesson' he gives the younger boys is about the discretionary behaviour of those in power (adults, ultimately) and the little ones will (eventually) learn to

solve their own disputes, without appealing to an outer court; in other words, institutions, the elderly (as such in a position of power) are not to be trusted. The external reward (which the older boy took for himself) rather strengthens undesirable behaviour from the point of view of *neighbourly morality* Howard Gardner speaks of: „As human beings living in neighbourhoods, we are expected, and expect others, to behave in a moral way. That’s what it means to be a good person.” (Gardner, 2012, p. 91).

2.4 Rewards That Do Not Undermine Internal Motivation

External rewards do not undermine internal motivation if the child perceives them as information regarding their capacity to understand or handle a thing or event. In this sense, Deci and Ryan note: „Task non-contingent rewards appear not to decrease intrinsic motivation because they do not create an instrumentality and are not experienced as controlling.” (Deci/ Ryan, 1985, p. 75) Analyzing textbooks that are part of our sample we found a single text that does not include in its narrative implications specific to pop behaviourism, *Cum crește un calificativ/ How to grow a grade*, by Mircea Sântimbreanu: because she preferred to play, the girl (main character in the text) did not finish her homework and the next day in school she got a lower grade; unhappy, the girl wondered what was the cause of this incident and understood that incomplete homework is not useful: „Upset, the girl thought: ‘Wouldn’t it be good for all small grades to grow like vegetables in the garden. She pictured herself, watering can in her hand and a harvest of higher grades. She looked back to her notebook. There stood the grade, unchanged. She began to write her homework. At last, it was over. She was tired, but happy.’ (Dobra, 2014, p. 42) Clearly, the next day she received a high grade. It appears that the girl perceived the grade she received as an objective description of her powers and not as a coercive and controlling instrument of the teacher. It is worth emphasizing that usually lower grades undermine internal motivation and are perceived by the child as punishment, which was never the case with the girl in the analyzed text; it is why we believe that this text is well chosen (alas, the only one so). The same type of message that can be perceived as an external reward but which does not undermine internal motivation is provided by a trick used by Iliana Dumitrescu and Daniela Barbu, the authors of *Communicating in Romanian Textbook for First Graders*(CD PRESS Publishing House); they introduced an emoticon named Roco, as a guide and friend of children; it appears in every lesson to give advice and ask questions. At the end of the textbook (p. 61) Roco urges the child to stick their photo in a specifically created space, as they have now graduated first grade; the implicit message this incentive bears (although a symbolic reward) is perceived by the child as a recognition of their ability to choose (self-determination) and to effectively use the alphabet as a communication tool (this type of reward does not undermine internal motivation).

3. Conclusions

We believe that the development and use of digital textbooks in the educational process is a good idea because it allows the injection of elements specific to informal education in formal education; more specifically, skills that characterize the digital generation (the use of apps on intelligent terminals connected to the internet) may be used in classroom, as part of formal education; unfortunately, as we will demonstrate in a subsequent study, the analyzed textbooks ignore the specific format of a digital textbook and do not allow group work, sharing information, immersion, control of the time and ways of

solving school tasks, etc. Also, we believe school textbooks (be they traditional or digital) should be the responsibility of multidisciplinary teams, that include specialist teachers with teaching expertise (to oversee the teaching registry), academics (to oversee the scientific registry) and specialists in education sciences (to explicit the implications of the selected contents in shaping children's personality). On the other hand, using an integrated curriculum (as is the case with Romanian primary education) involves widening the educational registry beyond the contents of the specific curricular area, to capture the influences of learning experiences at the default level of shaping children's mentalities and life skills.

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