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Modelling Authenticity in Teaching and Learning Contexts: A Contribution to Theory Development and Empirical Investigation of the Construct

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Abstract: Authenticity as a concept is used in a multitude of settings and is linked to various – to some extent divergent – pedagogical ideas. This contribution proposes an interdisciplinary, literature-based conceptualisation of the term leading to the modelling of authenticity in teaching and learning contexts. The model can serve as a basis for designing further empirical surveys and educational interventions.

Keywords: authenticity, modelling, learning settings, education, authentication, interdisciplinary

“Authenticity is not brought into the classroom with the materials or the lesson plan, rather, it is a goal that the teacher and students have to work towards, consciously and constantly” (van Lier, 1996).

Introduction

‘Authenticity’ is a common term which is generally understandable in everyday life. However, with regard to academic contexts a discrepancy can be found between the term’s use and its conceptual understanding in different academic disciplines. Furthermore, there is a research gap concerning theory development despite the fact that authenticity is frequently advocated in the design of learning settings as it is supposed to stimulate the learning process. Especially for learning outside the classroom the importance of an authentic educational setting is often emphasised (e.g. Engeln, 2004; Lave & Wenger, 1991). Therefore, the aim of this paper is to develop a model of authenticity based on a review of empirical and theoretical research literature. This permits a multidimensional approach to the concept thus allowing for an operationalisation appropriate to the general research discourse as well as future studies. We begin by developing a literature-based, interdisciplinary concept of authenticity and will then present our model as well as its importance for future research.

Conceptualisation of the term authenticity in educational contexts

We conceptualise the term taking into account perspectives from humanities as well as science teaching, and, in particular, the subject areas of geography education, history education and language teaching (first and foreign language). Our research process focusses on the databases PsychInfo, FIS, JSTORE and ERIC using the keywords ‘authentic’, ‘authenticity’, ‘authentic teaching’, ‘authentic learning’, ‘situated learning’ and ‘real learning contexts’. It includes both empirical studies and theoretical papers written in English and German.

As a first result it became clear that the term ‘authentic’ is used differently in everyday communication compared to educational scientific discourses: in everyday communication the term ‘authentic’ is often used synonymously with the words ‘real’ or ‘genuine’. In educational discourses, however, ‘authentic’ learning settings are mostly simulations of everyday or professional contexts (cf. Billett, 2012). To resolve this paradox, the term ‘authenticity’ has to be conceptualised differently. If one assumes a contrast between real-life and highly-structured learning arrangements, authenticity in subject learning can be seen as a continuum between these two poles: the more successful the staging of a real-life context, the higher the level of authenticity. For instance, in authentic learning settings everyday or professional-scientific contexts are simulated in order to give students an insight into these areas and, moreover, to foster transferable knowledge and student competences (e.g. Brown, Collins & Duguid, 1989; Mandl, Gruber & Renkl, 2002). Nevertheless, one can only speak of a simulation because in learning situations some kind of instructional implementation and thus dissociation from the contextual reference is always present.

The way in which authenticity is orchestrated differs strongly between the various subject areas. Nonetheless, it is possible to identify specific trends they all have in common, e.g. an approximation of the employed method and the material to everyday or professional actions (e.g. Gilmore, 2007; Monte-Sano & Reisman, 2015; Emden, 2011). Texts which are frequently seen as constituting authentic material are those which (a) are not specially written for classroom use, and (b) enable a scientific learning approach (for example original target-language literature in foreign language teaching, sources in history education, or measurements in geography education). Here, a close link to the subject-specific method is already discernible as a propaedeutic approach towards research practices is often intended. Hence, the learning settings and methods share features

with the domains knowledge and competences should be imparted about (Roth, 1995). Moreover, in foreign language teaching the premise is to integrate target cultures of native speaker communities in the classroom. However, critics refute the claim of authenticity regarding such learning settings and point out that an assimilation towards target language-cultural contexts (a) can never achieve a truly convincing simulation of native speaker language, and (b) the students' subjective perception of authenticity would suffer strongly from the "make-believe" (Decke-Cornill, 2004). Particularly in foreign language teaching it is recognised that the learner's perception of authenticity plays a central role (Breen 1985), meaning that learners evaluate a learning setting based on their beliefs, knowledge, interests, abilities and requirements (e.g. Widdowson, 1978; van Lier, 1996). This process is called 'authentication' and implies that learners engage in and appropriate (parts of a) learning setting in an interactive process with their peers and their surroundings (cf. van Lier 1996).

To summarise, authenticity in the sense of an educational construct can be defined as a characteristic of teaching and learning contexts which consists of transferring certain features of real life and professional contexts to learning environments. This simulation is negotiated along a continuum through the interaction between the designed learning environment and the actors within it. The aim of authentic teaching is to increase variables that are relevant to successful learning, such as motivation or interest, and to acquire transferable knowledge and domain-specific competences. Following this concept of authenticity, we will now present a model condensing different aspects of and showing the relevant cause-effect-relationships in authentic educational contexts.

Describing and explaining the model

Based on the findings from empirical educational-psychological and subject-based research, authenticity in teaching and learning contexts can be modelled in the following way (Figure 1):

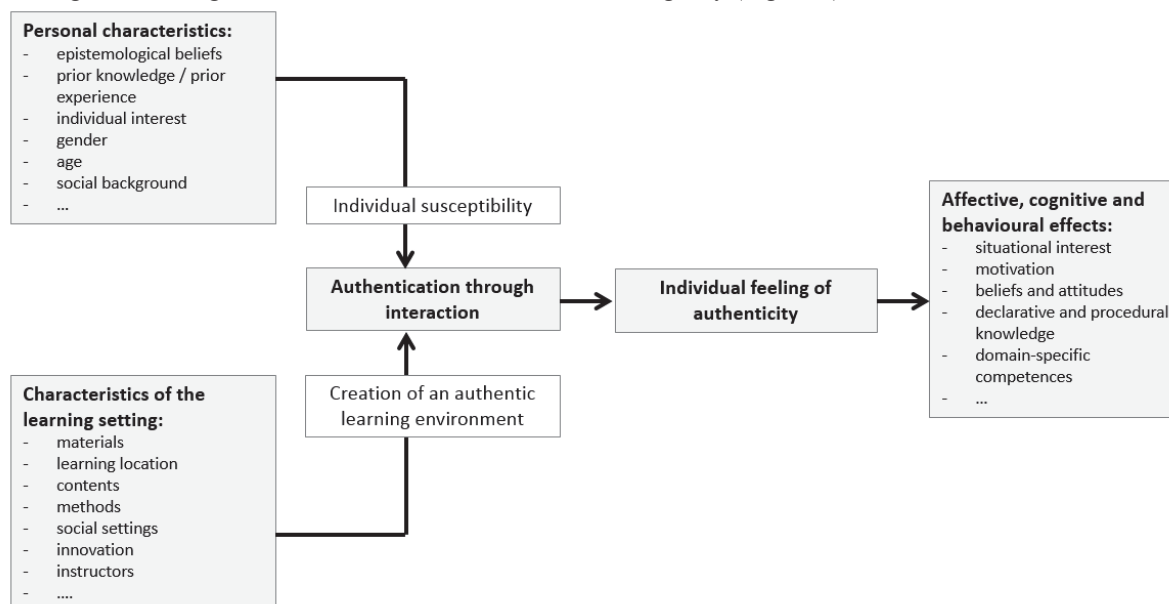


Figure 1. Model of authenticity in teaching and learning contexts.

The model consists of five components: (a) *personal characteristics*, (b) *characteristics of the learning setting*, (c) *authentication through interaction*, (d) an *individual feeling of authenticity* and (e) its *effects*. In terms of design the model is based on general progression schemas from educational psychology (e.g. for the development of interest; Krapp, 1998). While the personal characteristics and characteristics of the learning setting presented in the model are well-established in theoretical literature, empirical research on this domain is scarce. Also concerning the effects of an individual feeling of authenticity only a few studies exist (e.g. Glowinski & Bayrhuber, 2011; Engeln 2004; Peacock 1997) and evidence for relationships between the single variables are non-existent. Thus, the combination of all factors in one model constitutes an important step for theory development in authenticity and can serve as a basis for further empirical research. The model's single components, their relationship and empirical evidence therefor will be described in detail below.

- a. The first two components in the model are the determining factors of authenticity in teaching and learning contexts, i.e. (a) *personal characteristics*, and (b) *characteristics of the learning setting*. The *personal characteristics* comprise the learner's individual dispositions, more precisely input factors such as individual interest and prior knowledge, which the learner brings into a potentially authentic teaching

and learning context. Such dispositions like, for example, individual interest, have proven to be important prerequisites for learning (e.g. Pawek, 2009) and influence the learner's susceptibility to the designed learning environment.

- b. The *characteristics of the learning setting* describe the dimension of the model that can be manipulated and varied in a learning setting by the instructor or teacher. The characteristics should then converge with everyday and professional reality as closely as possible to create an authentic learning setting. Furthermore, central characteristics of authentic learning settings identified on the basis of literature in the subject areas are: material, learning location, contents, methods, social settings, innovation and instructor. Under 'materials' we subsume all media enabling a realistic content-based approach to the everyday or professional world. The 'learning location', in the sense of situated learning, permits insights into the work of 'communities of practitioners' (Lave & Wenger, 1991). The selection of 'contents' can be shaped in such a way, that themes from the respective 'real' reference context are brought to the fore. Problems and questions can be tackled with specific 'methods' and corresponding 'social settings' within authentic contexts. Examples in this regard include scientific methods (interpretation of historical sources, evaluation of measurements in geography or literature analysis in language teaching etc.) which can be imparted through inquiry- and task-based learning (Willis & Willis, 2007; Chinn & Malhotra, 2002) or the approach of 'cognitive apprenticeship' (Brown, Collins & Duguid, 1989). The characteristic 'innovation' means open questions or problems which are currently central to research or the subject of social controversies and to which the learners can contribute meaningfully. Finally, it is the 'instructors' responsibility to make authentic learning possible or provides access to the reference context. The arrangement of these characteristics takes place on a continuum according to their level of structuring.
- c. The process of *authentication through interaction* involves actions in which interplay of characteristics of the person and the learning setting occurs including mediation between peers. Here, the interaction between determining factors and the learner's subjective perception of the learning setting plays a fundamental role (e.g. van Lier, 1996).
- d. A *feeling of authenticity* would then be a feasible result of the authentication process. This feeling is subjective and can be determined through inquiries in the learner's perception of the learning setting and their attribution of relevance.
- e. The perception of a learning situation as authentic may have *affective, cognitive and behavioural effects*, e.g. motivation, situational interest, domain-specific competences etc. (cf. Newmann, King & Carmichael, 2007), which influence the personal characteristics. In this respect a whole series of empirical studies in the area of Reach out Labs show that authentic, scientifically based learning environments have a positive temporal effect on students' situational interest (e.g. Engeln, 2004; Pawek; Glowinski & Bayrhuber, 2011). Furthermore, other studies showed that tasks, perceived as authentic, have a learning-conducive effect (Chavez, 1998) and authentic materials bring about an increase in learning motivation (Peacock, 1997; Chavez, 1998), reading and listening comprehension (cf. Young, 1993; Weyers 1999) as well as in writing skills (Purcell-Gates, Duke & Martineau, 2007).

Conclusion and implications

This contribution addresses two research gaps with respect to the authenticity of learning settings: (1) on the basis of a literature review it contributes to cross-discipline theory development connected with the concept of authenticity in educational contexts and names various characteristics which can have an impact on the authenticity of a teaching and learning setting. (2) The presented authenticity model is suitable for purposes of orientation in the design of interventions and surveys as it contains determinants influencing an individual feeling of authenticity. Thus, it can be used in future research to investigate possible effects of authentic learning settings (e.g. ask for the learner's perception of characteristics of a learning setting via questionnaires in order to measure an individual feeling of authenticity; compare authentic conditions with non-authentic conditions to determine effects) and augment construct validity. The multidimensional model lays claim to applicability both to studies in the area of extracurricular learning and, with regard to educational questions, to desirable further research into the role of authenticity in teaching and learning contexts. The model already forms the basis for several research studies currently in progress at the Ruhr-Universität Bochum, Germany in the postgraduate programme "Communicating Science in Reach out Labs".

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