Our work presents the realization of a platform of computer-assisted language learning CETLEF, featuring
on-line fill-in-the-blank exercises with automatic feedback on errors. CETLEF, consisting of a relational data base and author and learner interfaces, rendered necessary the definition of a model for declension in Czech. This model contains a detailed classification of the paradigms and rules for the realization of vocalic and consonantal alternations. It enables the morphological annotation of required forms, the didactic presentation of the morphological system of Czech on the learning platform, as well as the automatic error diagnosis. Diagnosis is carried out by the comparison of an erroneous production with hypothetical forms generated from the stem of the required form. An appraisal of the diagnosis of the productions collected on CETLEF shows that the vast majority of errors can be interpreted with the aid of this technique.