|  |  |
| --- | --- |
| Document version | V1.1 |
| Project | European Blockchain Service Infrastructure- Educational Use Case |
| Authors | Carmen L Padrón-Nápoles (KIC) |
| Version shared with | German participant in the Use Case |
| Current status | To be validated |
| Validated by |  |

**Object:** This document presents a basic general guideline describing how to create new examples to be used in the Educational Use Case. It is recommended to use this document as a complement of the Recommended Practices [document](https://ec.europa.eu/digital-building-blocks/wikis/display/BLOCKCHAININT/Diplomas+-+Recommended+Practices)

**General guideline to create new examples for the Educational Use case.**

Verifiable Attestations are a special type of Verifiable Credentials (VCs) that Natural Persons and Legal Entities can put forward  as evidence of certain attributes/properties or as evidence of a permit/attestation/authorization he/she/it received.

Verfiable Diplomas are Verfiable Attestations which can be used to model the information indicated in any or any possible logical combination of the following cases:

* that the owner has achieved certain learning outcomes (skills, competences) through formal or non formal learning contents
* the owner performed certain learning activities which could lead or not to attain the specified outcomes
* the owner is entitled to access a learning opportunity or to perform specific employment

It should be noted that Verifiable Diploma schema separates a person's 'personal' attributes from their 'educational achievement' attributes. Therfore, a credential for any of the educational achievements previously described should then only include the student's DID, any other identifiers which do not reveal information which is present in the Verifiable Attestation for ID, together with their educational achievements. To this end, a student should always be issued either a **Verifiable ID**or a **Verifiable Attestation for ID**. This will contain all personal data such as name, date of birth, residence, student ID number, etc.

Such data compartimentation aside from general advantages around data protection, this also provides specific advantages in terms of supporting EC policies around supporting blind evaluation of credentials for positions to combat social inequities.

The next figure includes an UML diagram presenting the main relationships between the different content classes of the Verfiable diploma schema. This diagram should be used as an aid to better understand how the different entities described in the [Verifiable Diploma schema](https://ec.europa.eu/digital-building-blocks/wikis/display/EBSIEA/Verifiable+Diploma+Schema) and the [JSON schema](https://ec.europa.eu/digital-building-blocks/code/projects/EBSI/repos/json-schema/browse/schemas) created by the experts from ESBI Educational Diploma Use Case can be used to model different learning achievements.

Diagram

Description automatically generated

**German Upper secondary school certificate.**

In the case of the German Upper secondary school certificate, we got as reference [the PDF document](https://ec.europa.eu/digital-building-blocks/wikis/download/attachments/446758959/Bengales_highSchoolDiploma.pdf?version=1&modificationDate=1635232337489&api=v2) which includes the structure and sample data for a certificate. In the rest of this document, it will be referred as Certificate sample. Using such information, we had generated 3 samples of documents:

1. **A Verifiable Attestation for the learner ID** which includes the personal information of the learner owner of the Higher Education Entrance Qualification report for admission to Higher Education institutions.
2. **A Verifiable Attestation for the organization ID** which includes the basic data (identifier and name) of the institution issuing the Certificate sample.
3. **A Verfiable Diploma** which includes all the data related to Certificate of the Higher Education Entrance Qualification which describes the overall learning qualification based on the *different learning achievements* attained during the Qualification phase Q and results of the final examination A. The Overall qualification has been considered as the main *learning achievement* which is composed of lower granularity *learning achievements* (Q and A).

Each of the achievements Q and A are then described in terms of the basic information provided about the learning assessment (add data) carried out by the learner in Pages 1 and 2 of the Certificate sample. Each of the learning assessment es are in turn described with regards to the assessment specification.