Version 3.0.1
2016-06-09

Technical Specification

Outcome API

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1 Introduction

The Outcome API in Lifecare Education API Services provides services that make it possible to get and set the students outcome, i.e. grades, assessments and national tests. The services in the Outcome API are accessed via URIs.

This document describes following:

- Which grade, assessment and national test information that a user can get and set via the Outcome API.

- How the grade, assessment and national test information is divided into entities and how these entities are structured.

1.1 Prerequisites

Before you can get access to the Outcome API you must request a license key from Tieto. You should have basic knowledge on Swedish school system and W3C XML before you start using the API.

2 Supported school types

The table below describes the supported types of school.

School type	Description	Code
Compulsory School	Primary school organization for younger students	GR
Compulsory School For Learning Disabilities	Organization for compulsory school for learning disabilities	S
Upper Secondary School	Secondary school organization 3-4 years education	GY
Upper Secondary School For Learning Disabilities	Organization for secondary school for learning disabilities	GS
Swedish For Immigrants School	Organization for Swedish immigrants	SF
Adult School For Learning Disabilities	Organization for adult school for learning disabilities	SV
Municipal Adult School	Municipality school organization for adults	KV
Higher Vocational Education	Organizations for Higher Vocational Education	YH

3 Grade reports

3.1 Outcome

3.1.1 Supported outcome for the different school types

This chapter describes the supported outcome for the different types of school.

School type	Outcome
Compulsory School	Final report, Semester report
Compulsory School For Learning Disabilities	Final report, Semester report
Upper Secondary School	Diploma certificate report, Study certificate report, Catalog extraction report, Upper secondary school certificate report
Upper Secondary School For Learning Disabilities	Diploma certificate report, Catalog extraction report
Swedish For Immigrants School	Catalog extraction report
Adult School For Learning Disabilities	Catalog extraction report
Municipal Adult School	Diploma certificate report, Study certificate report, Catalog extraction report
Higher Vocational Education	Diploma certificate report, Study certificate report, Catalog extraction report

3.1.2 Final report

Final report is given to students who finish the ninth grade at compulsory school and compulsory school for learning disabilities.

3.1.3 Semester report

Semester report is given to students twice a year, at the end of each semester. The first semester report is given at the end of the first semester in the sixth grade. The last semester report is given at the end of the first semester in the ninth grade.

The semester report is used for compulsory school and for compulsory school for learning disabilities.

3.1.4 Diploma certificate report

Diploma certificate report is given to students finishing last grade, with approved study result.

3.1.5 Study certificate report

Study certificate report is given to students finishing last grade, with not approved study result.

3.1.6 Catalog extraction report

A catalog extraction report contains the grades that have been set for a student at the time the catalog extraction report was created.

3.1.7 Upper secondary school certificate report

Upper secondary school certificate report is given to students that have finished an introduction program at upper secondary school.

3.2 Domain model

The diagram below describes how the grade information is divided into entities and how these entities are structured. The entities are grouped into course and subject oriented grades.
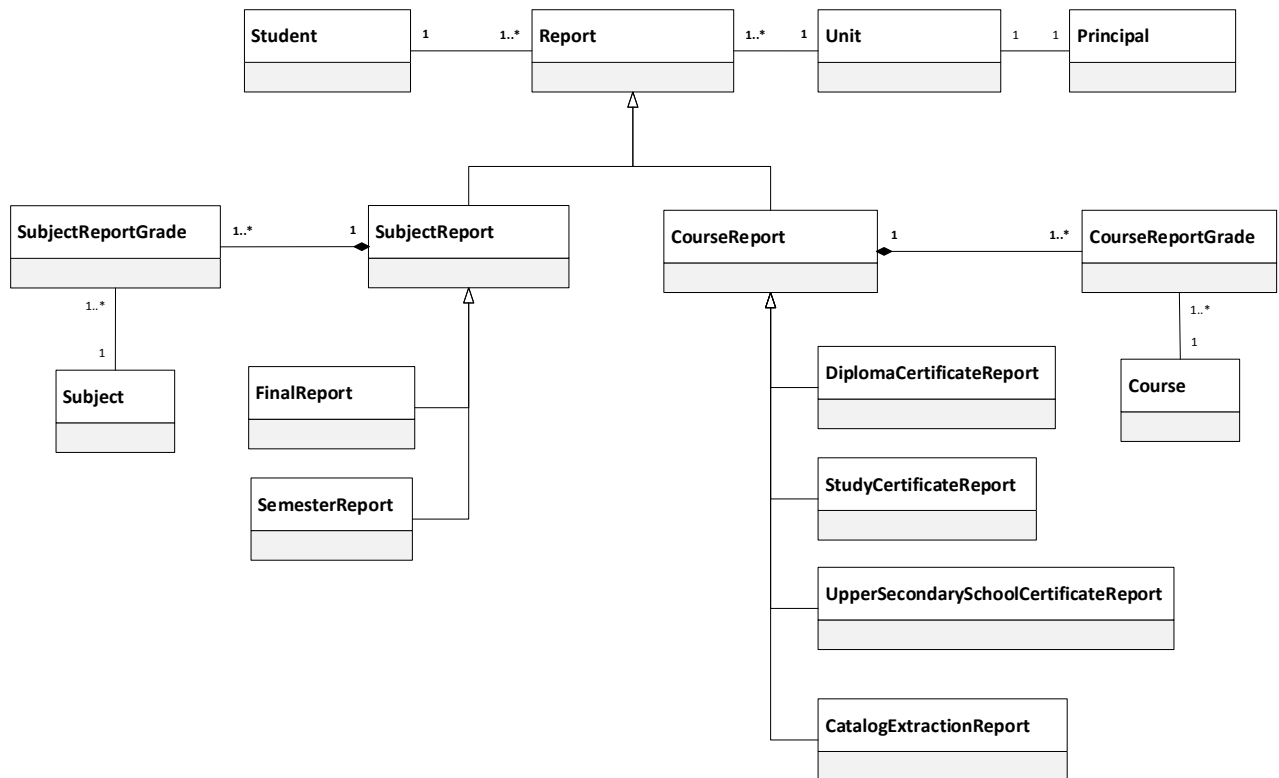
3.3 Entities

3.3.1 Report

Name	Description	Read-only
date	Date and time for the report	No
unit	The issuing unit	No
student	Student	No

3.3.2 SubjectReport

Name	Description	Read-only
schoolyear	School year for report	No

3.3.3 SubjectReportGrade

Name	Description	Read-only
subject	SCB subject code	No
grade	Grade for the subject	Yes
finalgrade	Indicates if the subject grade refers to a final grade, enumerated as True, False. (This attribute is only used for semester reports.)	Yes
adaptedstudytime	Indicates if the study time for the subject is adapted, enumerated as True, False. (This attribute is only used for semester reports.)	Yes
period	Period when grade was set as finalgrade	Yes

3.3.4 FinalReport

Name	Description	Read-only
grades	One or more subject report grades	No

3.3.5 SemesterReport

Name	Description	Read-only
semester	Autumn or spring semester	No
absence	Total absence in hours for the student	No
grades	One or more subject report grades	No

3.3.6 CourseReport

Name	Description	Read-only
program	The program code	No
basiceligibiltiy	Basic eligibility	No

3.3.7 CourseReportGrade

Name	Description	Read-only
course	SCB course code	No
grade	Grade for the course	Yes
trialperformed	Indicates that a trial of the course knowledge has been performed	Yes
date	Grade date	Yes
courselevel	Level of course	Yes

3.3.8 DiplomaCertificateReport

Name	Description	Read-only
grades	One or more course report grades	No

3.3.9 StudyCertificateReport

Name	Description	Read-only
grades	One or more course report grades	No

3.3.10 UpperSecondarySchoolCertificateReport

Name	Description	Read-only
grades	One or more course report grades	No

3.3.11 CatalogExtractionReport

Name	Description	Read-only
grades	One or more course report grades	Yes
absence	Total absence in hours for the student	Yes

Comment: Since all attributes are read-only, the whole CatalogExtractionReport is read-only and therefore import of CatalogExtractionReport is not supported.

3.3.12 Unit

Name	Description	Read-only
id	Id for the unit	No
schoolname	School name	Yes
schoolunitcode	School unit code	Yes
schoolunitname	School unit name	Yes
schooltype	School type, see supported school types	Yes
principal	Principal	Yes

3.3.13 Principal

Name	Description	Read-only
id	Principal identity	No
name	Principal name	Yes

3.3.14 Student

Name	Description	Read-only
id	Student identity. The id can be GUID or PID for the student.	No
name	Student name	Yes

3.3.15 Assessor

Name	Description	Read-only
id	Assessor identity	No
name	Assessor name	Yes

3.3.16 Course

Name	Description	Read-only
code	Course code	No
name	Course name	Yes
points	Total number of points for the course	Yes

3.3.17 Subject

Name	Description	Read-only
code	Subject code	No
name	Subject name	Yes

4 Grades

4.1 GradeOutcome

4.1.1 Supported outcome for the different school types

This chapter describes the supported outcome for the different types of school.

School type	Outcome
Compulsory School	Grade outcome with subject grades
Compulsory School For Learning Disabilities	Grade outcome with subject grades
Upper Secondary School	Grade outcome with course grades
Upper Secondary School For Learning Disabilities	Grade outcome with course grades
Swedish For Immigrants School	Grade outcome with course grades
Adult School For Learning Disabilities	Grade outcome with course grades
Municipal Adult School	Grade outcome with course grades
Higher Vocational Education	Grade outcome with course grades

4.1.2 Subject outcome

A student's grades in a subject

4.1.3 Course grade

A student's grades in a course

4.2 Domain model

The diagram below describes how the grades information is divided into entities and how these entities are structured.
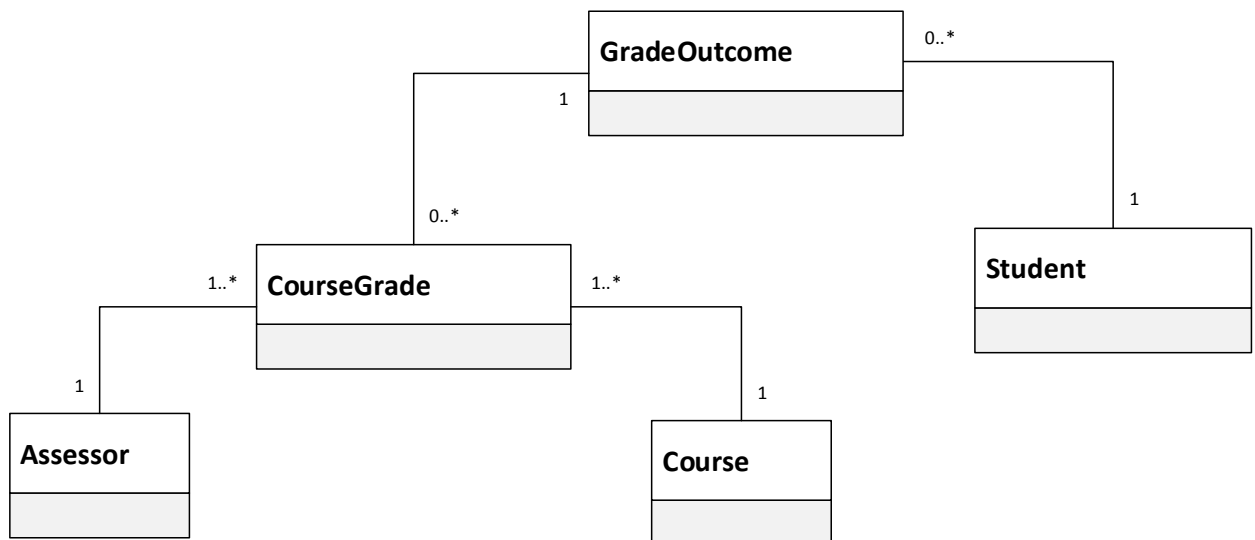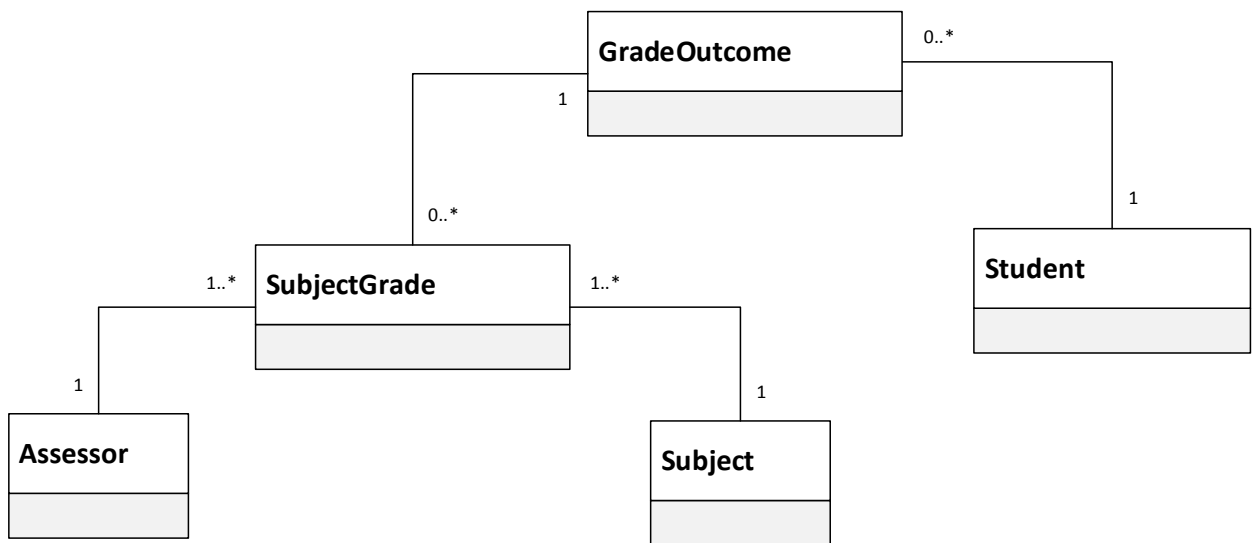
4.3 Entities

4.3.1 GradeOutcome

Name	Description	Read-only
student	Student	No
subjectgrade	The students subject grades	No
coursegrade	The students course grades	No
complete	If all the students grades are in the list	No

4.3.2 SubjectGrade

Name	Description	Read-only
assessor	Assessor for the subject	No
unitid	Unit id, use EXTERNAL for external grades	No
schoolname	School name	Yes
subject	Subject	No
grade	Grade for the subject	No
finalgrade	Indicates if the subject grade refers to a final grade, enumerated as True, False. (This attribute is only used for semester reports.)	No
adaptedstudytime	Indicates if the study time for the subject is adapted, enumerated as True, False. (This attribute is only used for semester reports.)	No
date	Date within the period for the grade	No

4.3.3 CourseGrade

Name	Description	Read-only
assessor	Assessor for the course	No
unitid	Unit id, use EXTERNAL for external grades	No
schoolname	School name	Yes
groupid	Group id	No
course	Course	No
grade	Grade for the course	No
trialperformed	Indicates that a trial of the course knowledge has been performed	No
date	Grade date	No

4.3.4 Student

Name	Description	Read-only
id	Student identity. The id can be GUID or PID for the student.	No
name	Student name	Yes

4.3.5 Assessor

Name	Description	Read-only
id	Assessor identity	No
name	Assessor name	Yes

4.3.6 Course

Name	Description	Read-only
code	Course code	No
name	Course name	Yes
points	Total number of points for the course	Yes

4.3.7 Subject

Name	Description	Read-only
code	Subject code	No
name	Subject name	Yes

5 Assessment

5.1 AssessmentOutcome

5.1.1 Supported outcome for the different school types

This chapter describes the supported outcome for the different types of school.

School type	Outcome
Upper Secondary School	Assessment outcome with course assessment
Upper Secondary School For Learning Disabilities	Assessment outcome with course assessment
Swedish For Immigrants School	Assessment outcome with course assessment
Adult School For Learning Disabilities	Assessment outcome with course assessment
Municipal Adult School	Assessment outcome with course assessment
Higher Vocational Education	Assessment outcome with course assessment

5.1.2 Course assessment

A student's assessment in a course

5.2 Domain model

The diagram below describes how the assessment information is divided into entities and how these entities are structured.
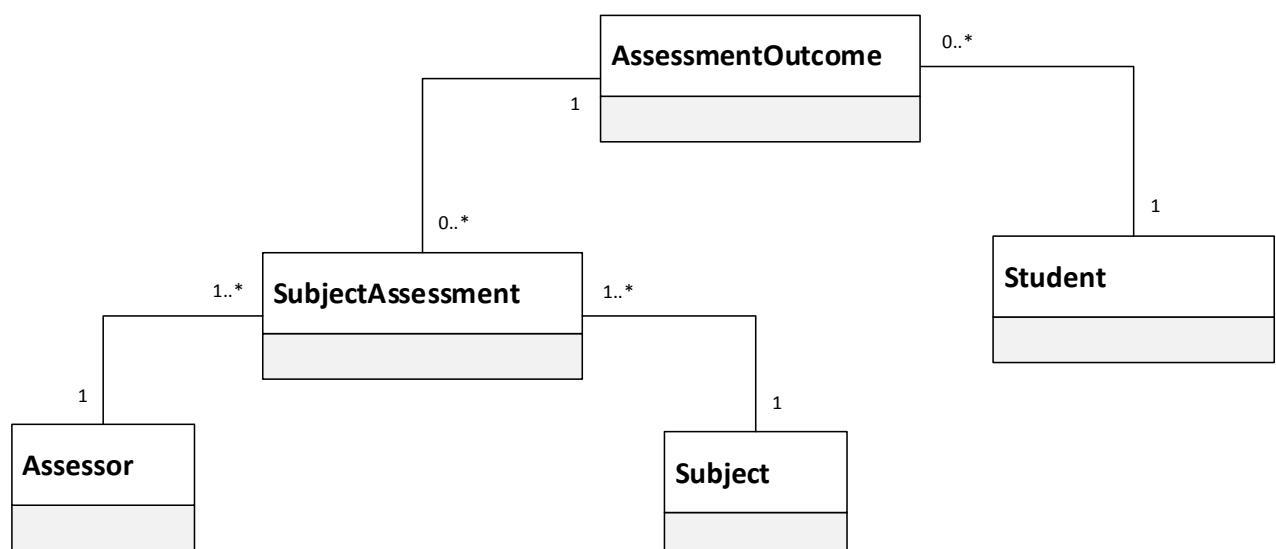
5.3 Entities

5.3.1 AssessmentOutcome

Name	Description	Read-only
student	Student	No
courseassessment	The students course assessments	No
complete	If all the students grades are in the list	No

5.3.2 CourseAssessment

Name	Description	Read-only
assessor	Assessor for the course	No
unitid	Unit id, use EXTERNAL for external assessments	No
schoolname	School name	Yes
groupid	Group id	No
course	Course	No
assessment	Assessment for the course	No
date	Assessment date	No

5.3.3 Student

Name	Description	Read-only
id	Student identity. The id can be GUID or PID for the student.	No
name	Student name	Yes

5.3.4 Assessor

Name	Description	Read-only
id	Assessor identity	No
name	Assessor name	Yes

5.3.5 Course

Name	Description	Read-only
code	Course code	No
name	Course name	Yes
points	Total number of points for the course	Yes

6 National tests

6.1 NationalTestOutcome

6.1.1 Supported outcome for the different school types

This chapter describes the supported outcome for the different types of school.

School type	Outcome
Compulsory School	NationalSubjectTest
Upper Secondary School	NationalCourseTest
Swedish For Immigrants School	NationalCourseTest
Municipal Adult School	NationalCourseTest

6.2 Domain model

The diagram below describes how the national test information is divided into entities and how these entities are structured.

tieto.com

```
                                    ┌─────────────────────────┐
                                    │   NationalTestOutcome   │ 0..*
                                    ├─────────────────────────┤        1
                              1     └─────────────────────────┘   ┌──────────────┐
                                                                  │   Student    │
        0..*                                                   1  ├──────────────┤
   ┌────────────────────────────┐                                └──────────────┘
   │  SubjectNationalTestResult │ 0..*
   ├────────────────────────────┤        1
1  └────────────────────────────┘   ┌──────────────┐
                                    │   Subject    │
   0..*                             ├──────────────┤
┌──────────────────────────────┐   └──────────────┘
│ SubjectNationalSubTestResult │
├──────────────────────────────┤
└──────────────────────────────┘
   0..*
      1
┌──────────────┐
│   Subject    │
├──────────────┤
└──────────────┘
```

```
                                    ┌─────────────────────────┐
                                    │   NationalTestOutcome   │ 0..*
                                    ├─────────────────────────┤        1
                              1     └─────────────────────────┘   ┌──────────────┐
                                                                  │   Student    │
        0..*                                                   1  ├──────────────┤
   ┌────────────────────────────┐                                └──────────────┘
   │  CourseNationalTestResult  │ 0..*
   ├────────────────────────────┤        1
1  └────────────────────────────┘   ┌──────────────┐
                                    │   Course     │
   0..*                             ├──────────────┤
┌──────────────────────────────┐   └──────────────┘
│ CourseNationalSubTestResult  │
├──────────────────────────────┤
└──────────────────────────────┘
   0..*
      1
┌──────────────┐
│   Course     │
├──────────────┤
└──────────────┘
```
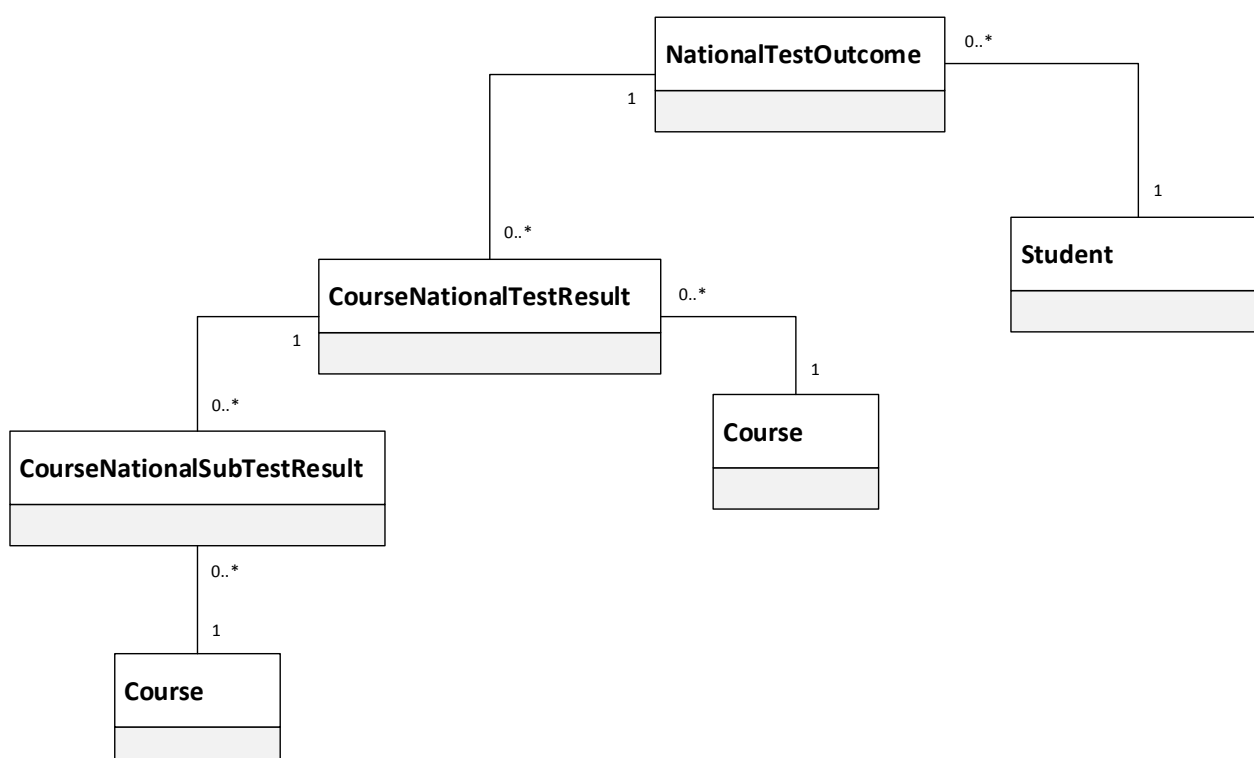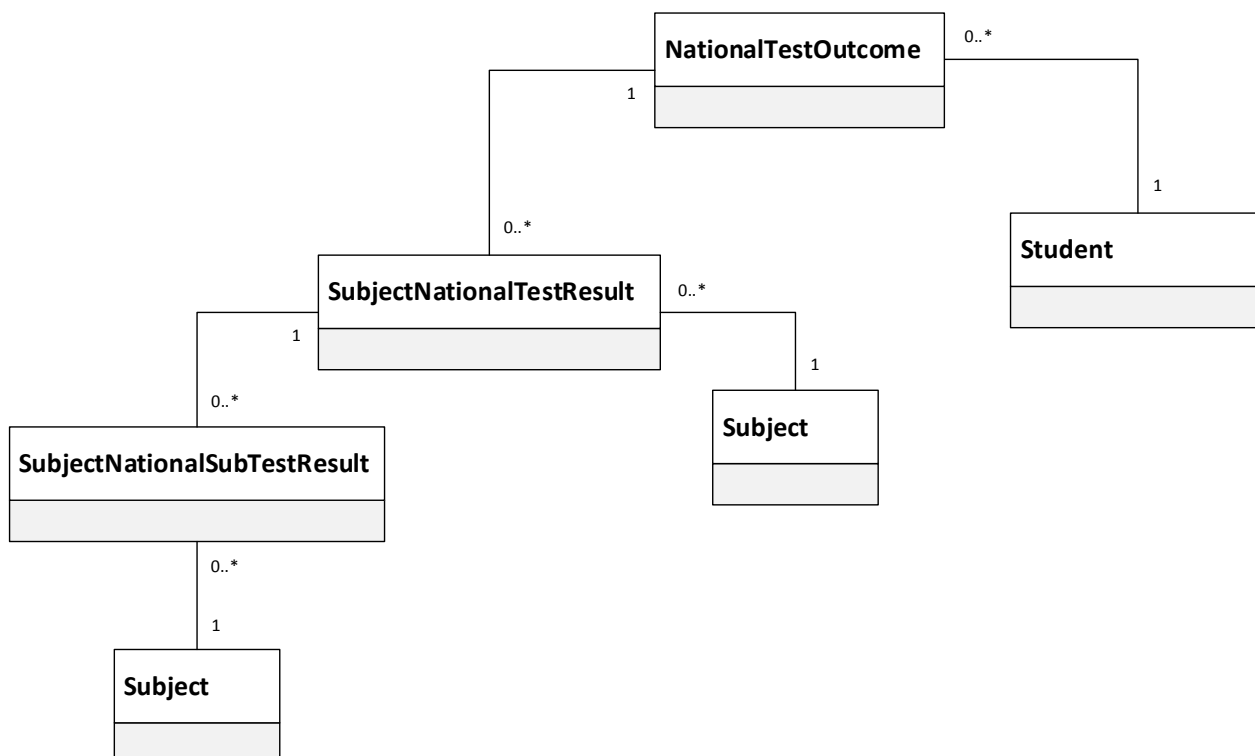
6.3 Entities

6.3.1 NationalTestOutcome

Name	Description	Read-only
student	Student	No
coursenationaltest	The students national test course grades	No
subjectnationaltest	The students national test subject grades	No
complete	If all the students grades are in the list	No

6.3.2 SubjectNationalTest

Name	Description	Read-only
subject	SCB subject code	No
subtest	Indicates if the test is a subtest or not	No
points	Points at the test	No
date	Test date	No
schoolyear	The school year in which the national test was performed.	No
grade	Grade for the national test	No

6.3.3 CourseNationalTest

Name	Description	Read-only
course	SCB course code	No
subtest	Indicates if the test is a subtest or not	No
points	Points at the test	No
date	Test date	No
grade	Grade for the national test	No

6.3.4 Student

Name	Description	Read-only

Name	Description	Read-only
id	Student identity. The id can be GUID or PID for the student.	No
name	Student name	Yes

6.3.5 Course

Name	Description	Read-only
code	Course code	No
name	Course name	Yes
points	Total number of points for the course	Yes

6.3.6 Subject

Name	Description	Read-only
code	Subject code	No
name	Subject name	Yes

7 Services

All services are based on HTTP REST technology and organized in school types to match each school structure. "Update services" are using the method HTTP POST and "Get services" are using the method HTTP GET.

7.1 Grade reports

7.1.1 Export

The services below give grade reports for a student or grade reports created within a specified date interval. The output is XML information with grade reports.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Parameters – Alternative 1:

Parameter	Mandatory	Description
Id	Yes	Student identity. The id can be GUID or PID for the student.

Parameters – Alternative 2:

Parameter	Mandatory	Description
StartDate	Yes	Start date in the format YYYY-MM-DD.
EndDate	Yes	End date in the format YYYY-MM-DD. The maximum allowed difference between start date and end date is one year.

Services:

Service	Description
GetCompulsorySchoolGradeReports	Get grade reports for compulsory schools student
GetCompulsorySchoolForLearningDisabilitiesGradeReports	Get grade reports for compulsory school with learning disabilities student
GetUpperSecondarySchoolGradeReports	Get grade reports for upper secondary school student
GetUpperSecondarySchoolForLearningDisabilitiesGradeReports	Get grade reports for upper secondary school with learning disabilities student
GetSwedishForImmigrantsSchoolGradeReports	Get grade reports for Swedish for immigrants student
GetMunicipalAdultSchoolGradeReports	Get grade reports for municipal adult school student
GetAdultSchoolForLearningDisabilitiesGradeReports	Get grade reports for adult school with learning disabilities student
GetHigherVocationalEducationGradeReports	Get grade reports for higher vocational education student

7.1.2 Import

The services below update or add new grade reports. The services take no parameters.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Services:

Service	Description
UpdateUpperSecondarySchoolGradeReports	Update or add new grade reports for upper secondary school student
UpdateUpperSecondarySchoolForLearningDisabilitiesGradeReports	Update or add new grade reports for upper secondary school with learning disabilities student

Service	Description
UpdateSwedishForImmigrantsSchoolGradeReports	Update or add new grade reports for Swedish for immigrants student
UpdateMunicipalAdultSchoolGradeReports	Update or add new grade reports for municipal adult school student
UpdateAdultSchoolForLearningDisabilitiesGradeReports	Update or add new grade reports for adult school with learning disabilities student
UpdateHigherVocationalEducationGradeReports	Update or add new grade reports for higher vocational education student

7.2 Grades

7.2.1 Export

The services below give grades for a student or grades created within a specified date interval. The output is XML information with grades.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Parameters – Alternative 1:

Parameter	Mandatory	Description
Id	Yes	Student identity. The id can be GUID or PID for the student.

Parameters – Alternative 2:

Parameter	Mandatory	Description
StartDate	Yes	Start date in the format YYYY-MM-DD.
EndDate	Yes	End date in the format YYYY-MM-DD. The maximum allowed difference between start date and end date is one year.

Services:

Service	Description
GetCompulsorySchoolGrades	Get grades for compulsory school students
GetCompulsorySchoolForLearningDisabilitiesGrades	Get grades for compulsory school for learning disabilities students
GetUpperSecondarySchoolGrades	Get grades for upper secondary school students
GetUpperSecondarySchoolForLearningDisabilitiesGrades	Get grades for upper secondary school for learning disabilities students
GetSwedishForImmigrantsSchoolGrades	Get grades for Swedish for immigrants

Service	Description
	school students
GetMunicipalAdultSchoolGrades	Get grades for municipal adult school students
GetAdultSchoolForLearningDisabilitiesGrades	Get grades for adult school for learning disabilities students
GetHigherVocationalEducationGrades	Get grades for higher vocational education students

7.2.2 Import

The services below update or add new grades for students. The services take no parameters.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Services:

Service	Description
UpdateCompulsorySchoolGrades	Update or add new grades for compulsory school students
UpdateCompulsorySchoolForLearningDisabilitiesGrades	Update or add new grades for compulsory school for learning disabilities students
UpdateUpperSecondarySchoolGrades	Update or add new grades for upper secondary school students
UpdateUpperSecondarySchoolForLearningDisabilitiesGrades	Update or add new grades for upper secondary school for learning disabilities students
UpdateSwedishForImmigrantsSchoolGrades	Update or add new grades for Swedish for immigrants students
UpdateMunicipalAdultSchoolGrades	Update or add new grades for municipal adult school students
UpdateAdultSchoolForLearningDisabilitiesGrades	Update or add new grades for adult school with learning disabilities students
UpdateHigherVocationalEducationGrades	Update or add new grades for higher vocational education students

7.3 Assessments

7.3.1 Export

The services below give assessment for a student or assessment created within a specified date interval. The output is XML information with assessments.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Parameters – Alternative 1:

Parameter	Mandatory	Description
Id	Yes	Student identity. The id can be GUID or PID for the student.

Parameters – Alternative 2:

Parameter	Mandatory	Description
StartDate	Yes	Start date in the format YYYY-MM-DD.
EndDate	Yes	End date in the format YYYY-MM-DD. The maximum allowed difference between start date and end date is one year.

Services:

Service	Description
GetCompulsorySchoolAssessments	Get assessments for compulsory school students
GetCompulsorySchoolForLearningDisabilitiesAssessments	Get assessments for compulsory school for learning disabilities students
GetUpperSecondarySchoolAssessments	Get assessments for upper secondary school students
GetUpperSecondarySchoolForLearningDisabilitiesAssessments	Get assessments for upper secondary school for learning disabilities students
GetSwedishForImmigrantsSchoolAssessments	Get assessments for Swedish for immigrants school students
GetMunicipalAdultSchoolAssessments	Get assessments for municipal adult school students
GetAdultSchoolForLearningDisabilitiesAssessments	Get assessments for adult school for learning disabilities students
GetHigherVocationalEducationAssessments	Get assessments for higher vocational education students

7.3.2 Import

The services below update or add new assessments for students. The services take no parameters.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Services:

Service	Description
UpdateCompulsorySchoolAssessments	Update or add new assessments for compulsory school students
UpdateCompulsorySchoolForLearningDisabilitiesAssessments	Update or add new assessments for compulsory school for learning disabilities students
UpdateUpperSecondarySchoolAssessments	Update or add new assessments for upper secondary school students
UpdateUpperSecondarySchoolForLearningDisabilitiesAssessments	Update or add new assessments for upper secondary school for learning disabilities students
UpdateSwedishForImmigrantsSchoolAssessments	Update or add new assessments for Swedish for immigrants students
UpdateMunicipalAdultSchoolAssessments	Update or add new assessments for municipal adult school students
UpdateAdultSchoolForLearningDisabilitiesAssessments	Update or add new assessments for adult school with learning disabilities students
UpdateHigherVocationalEducationAssessments	Update or add new assessments for higher vocational education students

7.4 National tests

7.4.1 Export

The services below give national test results for subjects and courses. The output is XML information with the national test results.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Parameters – Alternative 1:

Parameter	Mandatory	Description
Id	Yes	Student identity. The id can be GUID or PID for the student.

Parameters – Alternative 2:

Parameter	Mandatory	Description
StartDate	Yes	Start date in the format YYYY-MM-DD.
EndDate	Yes	End date in the format YYYY-MM-DD. The maximum allowed difference between start date and end date is one year.

Services:

Service	Description
GetCompulsorySchoolNationalTests	Get national test result for a compulsory school subject
GetUpperSecondarySchoolNationalTests	Get national test result for an upper secondary school course
GetSwedishForImmigrantsSchoolNationalTests	Get national test result for a Swedish for immigrants school course
GetMunicipalAdultSchoolNationalTests	Get national test result for a municipal adult school course

7.4.2 Import

The services below update or add national test results for subjects and courses. The services take no parameters.

Base path for services are: https://[host]/WE.Education.Integration.Host/LES/Outcome/V2/Outcome.svc

Services:

Service	Description
UpdateCompulsorySchoolNationalTests	Update or add new national test result for a compulsory school subject
UpdateUpperSecondarySchoolNationalTests	Update or add new national test result for an upper secondary school course
UpdateSwedishForImmigrantsSchoolNationalTests	Update or add new national test result for Swedish for immigrants course
UpdateMunicipalAdultSchoolNationalTests	Update or add new national test result for municipal adult school course

8 Appendix

8.1 References

Name	Address
Outcome API XML schemas and examples	https://github.com/ExchangeServices

8.2 Vocabulary

Word	Description
Child	Children below 6 year
Student	School student 6 year and older
PID	Personal identity, formatted [YYYYMMDDNNNN]
GUID	Global unique identifier