

Technical Specification

Outcome API



Table of Contents

1 Introduction	4
1.1 Prerequisites	4
2 Supported school types	5
3 Grade reports	6
3.1 Outcome	6
3.1.1 Supported outcome for the different school types	6
3.1.2 Final report	6
3.1.3 Semester report	7
3.1.4 Diploma certificate report	7
3.1.5 Study certificate report	7
3.1.6 Catalog extraction report	7
3.1.7 Upper secondary school certificate report	7
3.2 Domain model	7
3.3 Entities	8
3.3.1 Report	8
3.3.2 SubjectReport	8
3.3.3 SubjectReportGrade	9
3.3.4 FinalReport	9
3.3.5 SemesterReport	9
3.3.6 CourseReport	9
3.3.7 CourseReportGrade	9
3.3.8 DiplomaCertificateReport	10
3.3.9 StudyCertificateReport	10
3.3.10 UpperSecondarySchoolCertificateReport	10
3.3.11 CatalogExtractionReport	10
3.3.12 Unit	10
3.3.13 Principal	11
3.3.14 Student	11
3.3.15 Assessor	11
3.3.16 Course	11
3.3.17 Subject	11
4 Grades	13
4.1 Outcome	13
4.1.1 Supported outcome for the different school types	13
4.1.2 Subject grade	13
4.1.3 Course grade	13
4.2 Domain model	13
4.3 Entities	14
4.3.1 SubjectGrade	14
4.3.2 CourseGrade	14
4.3.3 Student	15
4.3.4 Assessor	15
4.3.5 Course	15

4.3.6 Subject	15
5 National tests	17
5.1 Outcome	17
5.1.1 Supported outcome for the different school types	17
5.2 Domain model	17
5.3 Entities	17
5.3.1 SubjectNationalTest	17
5.3.2 CourseNationalTest	18
5.3.3 Student	18
5.3.4 Course	18
5.3.5 Subject	18
6 Services	20
6.1 Grade reports	20
6.1.1 Export	20
6.1.2 Import	21
6.2 Grades	21
6.2.1 Export	21
6.2.2 Import	22
6.3 National tests	24
6.3.1 Export	24
6.3.2 Import	24
7 Appendix	26
7.1 References	26
7.2 Vocabulary	26

1 Introduction

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

This document describes following:

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

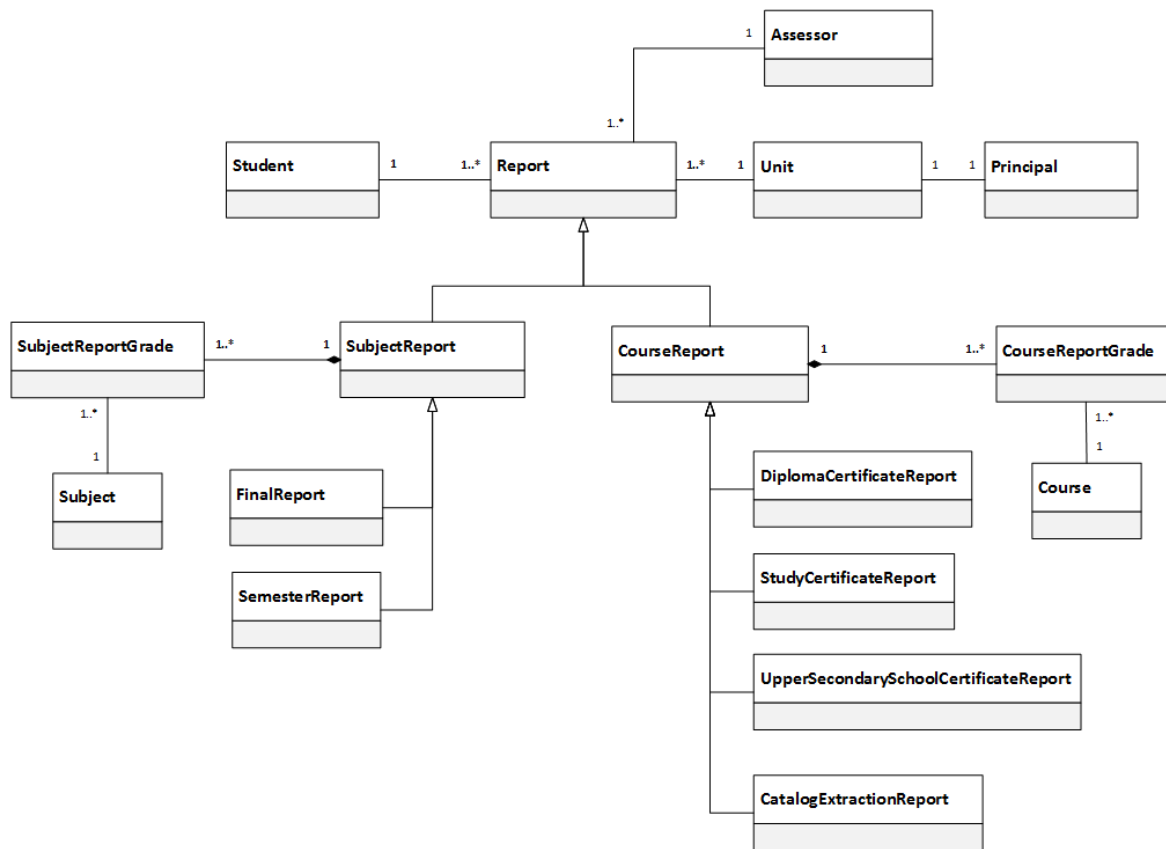
A catalog extraction report contains the grades that have been set for a student at the time the catalog extraction report was created.

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
assessor	Assessor for the report	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
corrected	Corrected grade, enumerated as True, False	Yes
referstofinalgrade	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

3.3.4 FinalReport

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

3.3.6 CourseReport

Name	Description	Read-only
program	The program code	No

3.3.7 CourseReportGrade

Name	Description	Read-only
course	SCB course code	No
grade	Grade for the course	Yes
corrected	Corrected grade, enumerated as True, False	Yes
extended	Indicates if the course is extended	Yes

Name	Description	Read-only
trialperformed	Indicates that a trial of the course knowledge has been performed	Yes
date	Grade date	Yes

3.3.8 DiplomaCertificateReport

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

3.3.9 StudyCertificateReport

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

3.3.10 UpperSecondarySchoolCertificateReport

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

3.3.11 CatalogExtractionReport

Name	Description	Read-only
coursereportgrade	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
schoolid	School id	No
schoolname	School name	Yes
schoolunitcode	School unit code	Yes

Name	Description	Read-only
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 Outcome

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
Preschool class	Subject grade
Compulsory School	Subject grade
Compulsory School For Learning Disabilities	Subject grade
Upper Secondary School	Course grade
Upper Secondary School For Learning Disabilities	Course grade
Swedish For Immigrants School	Course grade
Adult School For Learning Disabilities	Course grade
Municipal Adult School	Course grade
Higher Vocational Education	Course grade

4.1.2 Subject grade

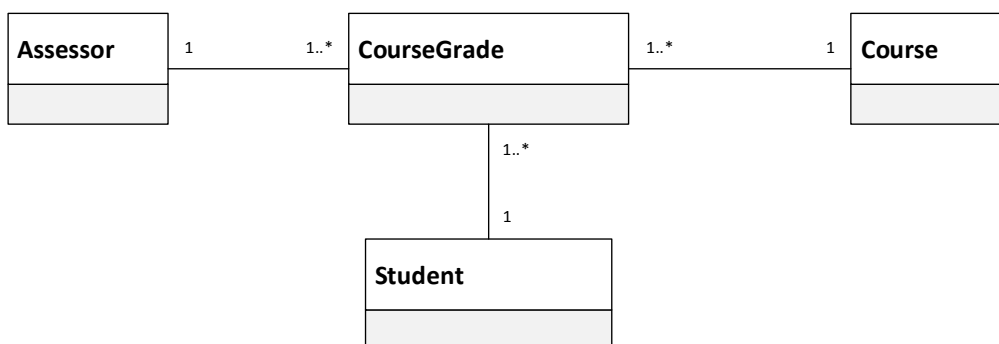
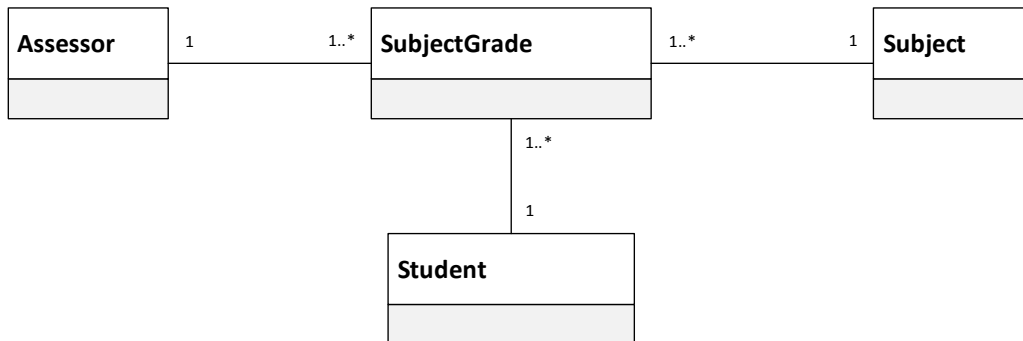
A student's grade in a subject

4.1.3 Course grade

A student's grade 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 SubjectGrade

Name	Description	Read-only
student	Student	No
assessor	Assessor for the subject	No
subject	Subject	No
grade	Grade for the subject	No
corrected	Corrected grade, enumerated as True, False	No
referstofinalgrade	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
schoolname	School name	Yes

4.3.2 CourseGrade

Name	Description	Read-only
student	Student	No
assessor	Assessor for the course	No
course	Course	No
grade	Grade for the course	No
corrected	Corrected grade, enumerated as True, False	No
extended	Indicates if the course is extended	No
trialperformed	Indicates that a trial of the course knowledge has been performed	No
date	Grade date	No
schoolname	School name	Yes

4.3.3 Student

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

4.3.4 Assessor

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

4.3.5 Course

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

4.3.6 Subject

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

5 National tests

5.1 Outcome

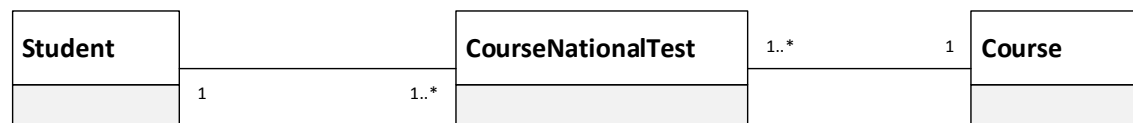
5.1.1 Supported outcome for the different school types

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

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

5.2 Domain model

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



5.3 Entities

5.3.1 SubjectNationalTest

Name	Description	Read-only
student	Student	No
subject	SCB subject code	No

Name	Description	Read-only
period	Period name	No
semester	Semester	No
schoolyear	The school year in which the national test was performed.	No
grade	Grade for the national test	No

5.3.2 CourseNationalTest

Name	Description	Read-only
student	Student	No
course	SCB course code	No
period	Period name	No
semester	Semester	No
grade	Grade for the national test	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 Course

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

5.3.5 Subject

Name	Description	Read-only
code	Subject code	No

Name	Description	Read-only
name	Subject name	Yes

6 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.

6.1 Grade reports

6.1.1 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/les/outcome/v1/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

Service	Description
GetAdultSchoolForLearningDisabilitiesGradeReports	Get grade reports for adult school with learning disabilities student
GetHigherVocationalEducationGradeReports	Get grade reports for higher vocational education student

6.1.2 Import

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

Base path for services are: <https://host/les/outcome/v1/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
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

6.2 Grades

6.2.1 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/les/outcome/v1/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 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

6.2.2 Import

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

Base path for services are: <https://host/les/outcome/v1/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

Service	Description
	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

6.3 National tests

6.3.1 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/les/outcome/v1/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

6.3.2 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/les/outcome/v1/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

7 Appendix

7.1 References

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

7.2 Vocabulary

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