

D6.1

OJS connector for OpenAIRE Research Graph

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Abstract	The existing OJS plugin for exporting publications metadata according to the OpenAIRE guidelines (https://github.com/ojsde/openAIRE) will be updated to ensure that metadata records can be aggregated in the OpenAIRE Graph (formerly known as OpenAIRE Research Graph), and consequently in the EOSC Resource Catalogue, with the highest metadata quality possible.

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List of Acronyms

AAI	Authentication and Authorization Infrastructure
API	Application Programming Interface
CA	Consortium Agreement
CC	Creative Commons
COAR	Controlled Vocabularies for Repositories
D	Deliverable
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
EC	European Commission
eISSN	electronic ISSN
EOSC	European Open Science Cloud
ISSN	International Standard Serial Number
ISSN-L	Linking ISSN
JATS	Journal Article Tag Suite
MU	Masaryk University
OA	Open Access
OAI-PMH	The Open Archives Initiative Protocol for Metadata Harvesting

OJS	Open Journal Systems
OpenAIRE	Open Access Infrastructure for Research in Europe
OPERAS	Open Access in the European Area through Scholarly Communication
ORCID	Open Researcher and Contributor ID
PID	Persistent Identifier
T	Task
TIB	Technische Informationsbibliothek (German National Library of Science and Technology)
TSV	Federation of Finnish Learned Societies
UGOE	Georg-August-Universität Göttingen
URL	Uniform Resource Locator
WP	Work Package
XML	Extensible Markup Language
XSD	XML Schema Definition

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Approval Pending

1 EXECUTIVE SUMMARY

This document provides information on the preparations to meet the specifications of Deliverable (D) 6.1, namely to give users of the Open Journal Systems (OJS) platform an easier way of indexing journal content within the Open Access Infrastructure for Research in Europe (OpenAIRE) database. The work is divided into several parts and an integral component is the OJS plugin that creates the OpenAIRE connector. The new plugin is publicly available as an open source project Git repository at GitHub: <https://github.com/munipress/openAIREstandard>.

Basic information about the OpenAIRE infrastructure and the OpenAIRE Guidelines for Literature Repository Managers v4 (abbreviated as OpenAIRE 4.0) profile are provided. There is a description of the namespaces and schemas that have been used for the work on the OJS plugin.

As the work is based on a pre-existing plugin, the past and current implementation and reasons for the replacement of the existing plugin are described in this document. A comparison of the output of the two currently existing plugins is given. An overview of the metadata provided to OpenAIRE is also included.

In the next section, there is a description of the process of registering a journal in OpenAIRE and its validation. The OpenAIRE Validator, which OpenAIRE itself highlights as a benefit of being part of its infrastructure, is a great asset for registering a repository or journal and checking metadata.

2 INTRODUCTION

The aim of this deliverable (D) is to provide users of the Open Journal Systems (OJS) platform with a simpler way of indexing journal content within the Open Access Infrastructure for Research in Europe (OpenAIRE) database.

The main output of this deliverable is a plugin for OJS. The plugin is a modification of the previously created plugin for OJS, so the differences between the two plugins are compared, and the decision to modify the original plugin to achieve better results is explained. The structure of the document is as follows:

- Section 1: Introduction and structure of the document.
- Section 2: Introductory notes on the OpenAIRE database, its environment, the test version and the conditions for indexing journals in OpenAIRE.
- Section 3: The description of the original plugin and the explanation of what the modification consists of and the benefits of such a modification.
- Section 4: How to register a journal into OpenAIRE.
- Section 5: The description of the data with which the plugin was deployed and tested within OpenAIRE, as well as the final result of the registration in the service.
- Section 6: The explanation of the role of the validator in the journal registration process, including its shortcomings for the future development of the service.
- Section 7: The scope for future improvement.
- Section 8: Conclusions.

3 INTRODUCTORY NOTES ON THE OPENAIRE E-INFRASTRUCTURE

“OpenAIRE AMKE is a non-profit organisation with a mission to promote open scholarship and improve discoverability, accessibility, shareability, reusability, reproducibility, and monitoring of data-driven research results, globally. The organisation operates a European e-infrastructure offering a diverse set of public services to accelerate the adoption of Open Science and is supported by a network of experts placed in key national organisations across European countries, the National Open Access Desks. The users of OpenAIRE services include researchers, research communities, policy makers, research-intensive organisations, SMEs, universities, libraries, and citizen scientists. OpenAIRE is a key implementer of the European Open Science Cloud (EOSC).”¹

“The OpenAIRE Graph (formerly known as the OpenAIRE Research Graph) is one of the largest open scholarly record collections worldwide, key in fostering Open Science and establishing its practices in the daily research activities. Conceived as a public and transparent good, populated out of data sources trusted by scientists, the Graph aims at bringing discovery, monitoring, and assessment of science back in the hands of the scientific community. Imagine a vast collection of research products all linked together, contextualised and openly available. For the past years OpenAIRE has been working to gather this valuable record. It is a massive collection of metadata and links between scientific products such as articles, datasets, software, and other research products, entities like organisations, funders, funding streams, projects, communities, and data sources.”²

OpenAIRE provides two environments for administrators to register and manage their journals or repositories.

- <https://beta.provide.openaire.eu/home> OpenAIRE test environment, where it is possible to register a journal, try the validator, but aggregation data is not freely available on the Internet.
- <https://provide.openaire.eu/home> OpenAIRE production environment. The OpenAIRE Explore and OpenAIRE Graph services make the indexed data freely available.

Data aggregation and indexing requires some pre-defined metadata conditions to be met. A number of guidelines³ for literary works are currently being supported:

- OpenAIRE Basic (DRIVER OA)
- OpenAIRE 2.0 (European Commission (EC) funding)
- OpenAIRE 3.0 (OA, funding)

¹ For more details about OpenAIRE see <https://www.openaire.eu/about>

² See OpenAIRE Graph documentation: <https://graph.openaire.eu/docs/> and for more details about OpenAIRE Graph <https://graph.openaire.eu/>

³ See <https://guidelines.openaire.eu/en/latest/>



- OpenAIRE 4.0 (inst. & thematic. repo.)

Without the OJS plugin, it is possible to index data at the “OpenAIRE Guidelines for Literature Repositories v3”⁴ level. The OpenAIRE 3.0 compatibility level setting uses the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) employing the Dublin Core metadata format with the metadataPrefix **oai_dc**. Version OpenAIRE 3.0 is the legacy standard now. The implemented plugin supports the latest compatibility level setting, which is OpenAIRE Guidelines for Literature Repository Managers v4 (abbreviated as OpenAIRE 4.0).

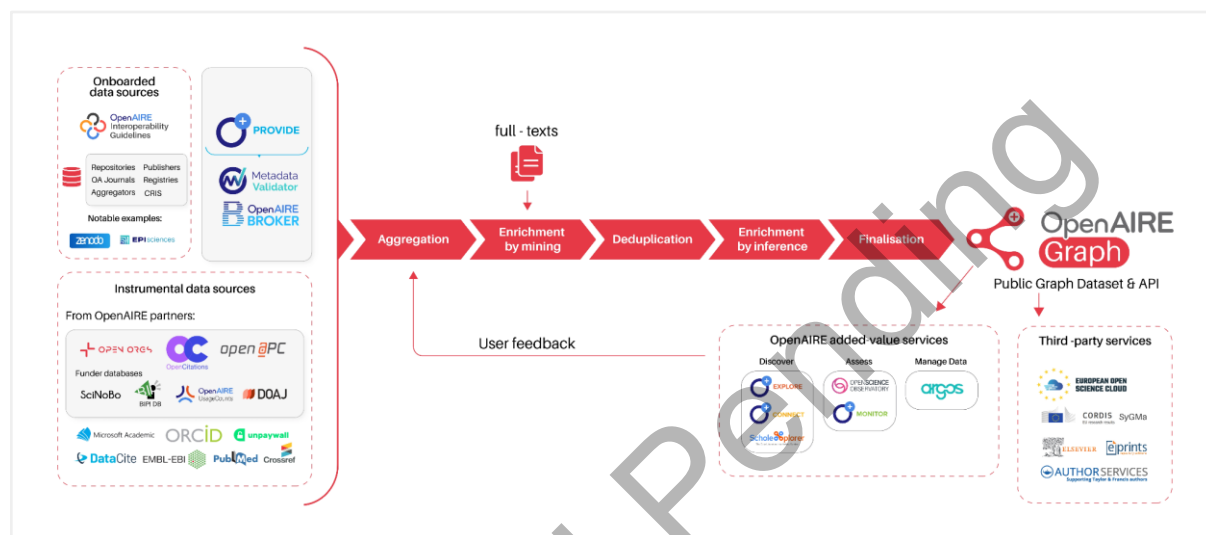


Figure 1: The aggregation-enrichment-deduplication pipeline of the OpenAIRE Graph

Figure 1 shows the pipeline that constructs the OpenAIRE Graph. Trusted sources like institutional and thematic repositories, journals, pre-print services and data archives that expose their metadata records according to the OpenAIRE guidelines and are registered in OpenAIRE PROVIDE contribute with their content to the OpenAIRE Graph. The content then goes through a deduplication process utilising persistent identifiers (PIDs) and other features of entities. Once the deduplication process has taken place, the Graph team then enriches the data with records from Crossref, Unpaywall, Open Researcher and Contributor Identifier (ID) (ORCID), Microsoft Academic, PubMed, DataCite, OpenCitations, UsageCounts. Full-texts of Open Access (OA) publications are also analysed and used to extract additional information that is not available in the bibliographic metadata like links to funding projects, to datasets, to software and citations. Publications are also classified by Fields of Science and Sustainable Development Goals. The enriched graph is eventually made available via the OpenAIRE portals, a metadata snapshot and is further analysed to produce statistics for the OpenAIRE MONITOR, including the Publisher Dashboard under development in Task 6.2 (T) of the CRAFT-OA project.

⁴ For detailed documentation see OpenAIRE (2015, 2022). *OpenAIRE Guidelines for Literature Repositories v3*. https://guidelines.openaire.eu/en/latest/literature/index_guidelines-lit_v3.html

3.1 OpenAIRE Guidelines for Literature Repository Managers v4

The OpenAIRE Guidelines version 4 were first introduced as a draft in 2017 and then published in 2018.⁵

The new guidelines introduce a new metadataPrefix for indexing, support for extended metadata for authors, organisations and foundations, and the use of controlled vocabularies for repositories (COAR) in metadata.

“By implementing these Guidelines, repository managers will not only be enabling authors who deposit publications in their repository to fulfil the EC Open Access requirements, and eventually also the requirements of other (national or international) funders with whom OpenAIRE cooperates, but also incorporating their publications into the OpenAIRE infrastructure for discoverability and utilising value-added services provided by the OpenAIRE portal.”⁶

3.2 Application profile overview

An application profile consists of a set of metadata elements, policies, and guidelines defined for a particular application. In order for a journal to be indexed in OpenAIRE, several metadata requirements and data harvesting settings must be met.

The first requirement is to add the **oai_openaire** metadataPrefix to the OAI-PMH protocol, which satisfies the metadata requirements of the predefined namespace. OpenAIRE 4.0 uses a combination of several namespaces described in the requirements definition⁷:

- **dc:** <http://purl.org/dc/elements/1.1/>
- **dcterms:** <http://purl.org/dc/terms/>
- **datacite:** <http://datacite.org/schema/kernel-4>
- **oaire:** <http://namespace.openaire.eu/schema/oaire/>

⁵ For detailed information see Schirrwagen, J., & Baglioni, M. (2018). *OpenAIRE Guidelines for institutional and thematic repository managers 4.0*. <https://doi.org/10.5281/zenodo.1299203>. The OpenAIRE Guidelines for institutional and thematic repository managers 4.0 are besides the on Zenodo published pdf available as online publication on GitHub. Since the individual sections of the publication can be linked directly in the online version, the following chapters of D6.1 refer several times to specific passages directly with the link to the GitHub version, even if the corresponding publication is always at the same time Schirrwagen & Baglioni (2018).

⁶ See and compare for more detailed information about the aim of OpenAIRE Guidelines for Literature Repository Managers 4.0 the introduction <https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/introduction.html>

⁷ See https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/application_profile.html

The full structure is then explained in the schema defined in the project on GitHub⁸ and is described in more detail in chapter 3.3 XML Schema.

The OpenAIREv4 profile divides metadata into several requirement levels, similar to the OpenAIRE 3.0 profile:

- **Mandatory (M)**
The property must always be present in the metadata. An empty value for the property is not allowed.
- **Mandatory if Applicable (MA)**
When the property value can be obtained it must be present in the metadata.
- **Recommended (R)**
The use of the property is recommended.
- **Optional (O)**
It is not important whether the property is used or not, but if used it may provide complementary information about the resource.

While updating the plugin, an effort has been made to maximise the amount of metadata that can be extracted from OJS using the metadata format.

The Application Profile provides an overall metadata inventory (see the table below) and describes the individual metadata comprehensively, including the metadata elements used. There is no need to further analyse the individual items thanks to the description provided in the OpenAIRE documentation.

⁸ See <https://github.com/openaire/guidelines-literature-repositories/>

OpenAIRE-Field	Metadata Element	Refinement by Vocabulary
Title (M)	datacite:title	title type
Creator (M)	datacite:creator	name type
Contributor (MA)	datacite:contributor	name type ; contributor type
Funding Reference (MA)	oaire:fundingReference	funderIdentifier type
Alternate Identifier (R)	datacite:alternateIdentifier	alternateIdentifier type
Related Identifier (R)	datacite:relatedIdentifier	relatedIdentifier type ; relation type ; resourcetype general
Embargo Period Date (MA)	datacite:date	date type
Language (MA)	dc:language	IETF BCP 47 , ISO 639-3
Publisher (MA)	dc:publisher	
Publication Date (M)	datacite:date	date type
Resource Type (M)	oaire:resourceType	COAR Resource Type Vocabulary
Description (MA)	dc:description	
Format (R)	dc:format	
Resource Identifier (M)	datacite:identifier	identifier type
Access Rights (M)	datacite:rights	COAR Access Right Vocabulary
Source (R)	dc:source	
Subject (MA)	datacite:subject	
License Condition (R)	oaire:licenseCondition	
Coverage (R)	dc:coverage	
Size (O)	datacite:size	
Geo Location (O)	datacite:geoLocation	
Resource Version (R)	oaire:version	COAR Version Vocabulary
File Location (MA)	oaire:file	
Citation Title (R)	oaire:citationTitle	
Citation Volume (R)	oaire:citationVolume	
Citation Issue (R)	oaire:citationIssue	
Citation Start Page (R)	oaire:citationStartPage	

Citation End Page (R)	oaire:citationEndPage	
Citation Edition (R)	oaire:citationEdition	
Citation Conference Place (R)	oaire:citationConferencePlace	
Citation Conference Date (R)	oaire:citationConferenceDate	
Audience (O)	dcterms:audience	

Table 1: Complete list of metadata from OpenAIRE namespace [OpenAIRE Application Profile Overview]⁹

3.3 XML schema

As mentioned above, a combination of several namespaces is used for metadata, which together create a complex schema for describing metadata.

The overall extensible markup language (XML) schema is described as an XML Schema Definition (XSD) document on the OpenAIRE website¹⁰.

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:dcterms="http://purl.org/dc/terms/" xmlns:datacite="http://datacite.org/schema/kernel-4" xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns="http://namespace.openaire.eu/schema/oaire/" elementFormDefault="qualified" targetNamespace="http://namespace.openaire.eu/schema/oaire/" xsi:schemaLocation="http://www.w3.org/2001/XMLSchema https://www.w3.org/2012/04/XMLSchema.xsd">
  <xs:import namespace="http://purl.org/dc/elements/1.1/" schemaLocation="dc.xsd"/>
  <xs:import namespace="http://purl.org/dc/terms/" schemaLocation="dcterms.xsd"/>
  <xs:import namespace="http://datacite.org/schema/kernel-4" schemaLocation="datacite-v4.xsd"/>
  <xs:include schemaLocation="oaire.xsd"/>
  <xs:element name="resource">
    <xs:annotation>
      <xs:documentation> This schema defines the xml format for OpenAIRE Guidelines for Literature Repositories v4. The schema represents an application profile consisting of * elements from Dublin Core with optional refinement attributes xml:lang and rdf:resource * elements from DataCite metadata schema v4.1 to express granular information on creator, contributor, fundingReference, relatedIdentifier, alternateIdentifier, date, subject * elements from OpenAIRE to express information on bibliographic citation details, (fulltext) files, version and license condition </xs:documentation>
    </xs:annotation>
  </xs:element>
</xs:schema>

```

Figure 2: Part of provided XSD schema for metadataPrefix oai_openaire

The individual descriptions available from the GitHub project were also used to prepare the XML generator for the OAI-PMH protocol: <https://github.com/openaire/guidelines-literature-repositories/tree/master/schemas/4.0>

It describes the individual namespaces and the overall schema.

⁹ OpenAIRE Application Profile Overview metadata table:

https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/application_profile.html#application-profile-overview

¹⁰ XSD schema: <https://www.openaire.eu/schema/repo-lit/4.0/openaire.xsd>

4 OJS PLUGIN: CONNECTOR FOR OPENAIRE RESEARCH GRAPH

4.1 Status description

In 2019, a plugin was developed by the *Federation of Finnish Learned Societies (TSV) with funding of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)*¹¹ that uses the OAI-PMH protocol for data transfer. The plugin¹² is available at: <https://github.com/ojsde/openAIRE>

The original plugin extends the OAI-PMH environment with a metadata format with the **metadataPrefix** *oai_openaire_jats* and extends the basic structure described in the OpenAIRE namespace (see chapter 3.2) with a metadata structure in the form of a Journal Article Tag Suite (JATS) XML schema.

Metadata Format

metadataPrefix	<i>oai_openaire_jats</i>
metadataNamespace	http://jats.nlm.nih.gov
schema	https://jats.nlm.nih.gov/publishing/0.4/xsd/JATS-journalpublishing0.xsd

Figure 3: Metadata Format with *oai_openaire_jats* metadataPrefix

The plugin adds several options to the journal section setup in OJS, based on the specified description, to match the COAR Resource Type Genres Vocabulary¹³ article description.

Type of articles published in this section

research article

For better OpenAIRE compliance, uses COAR Resource Type Genres http://vocabularies.coar-repositories.org/documentation/resource_types/2.0.draft/

Figure 4: Type of articles settings for section in OJS after enabling the original plugin

¹¹ <https://github.com/ojsde/openAIRE?tab=readme-ov-file#sponsors>

¹² Nygård, A.-J., Vézina, M.-H., & Withanage, D. (2024). *OpenAIRE Guidelines for Literature Repository Managers v4 compatible OJS3 plugin* [Computer software]. <https://github.com/ojsde/openAIRE>

¹³ See Controlled Vocabularies for Repositories (2022). *Ressource Types 3.1*. https://vocabularies.coar-repositories.org/documentation/resource_types/

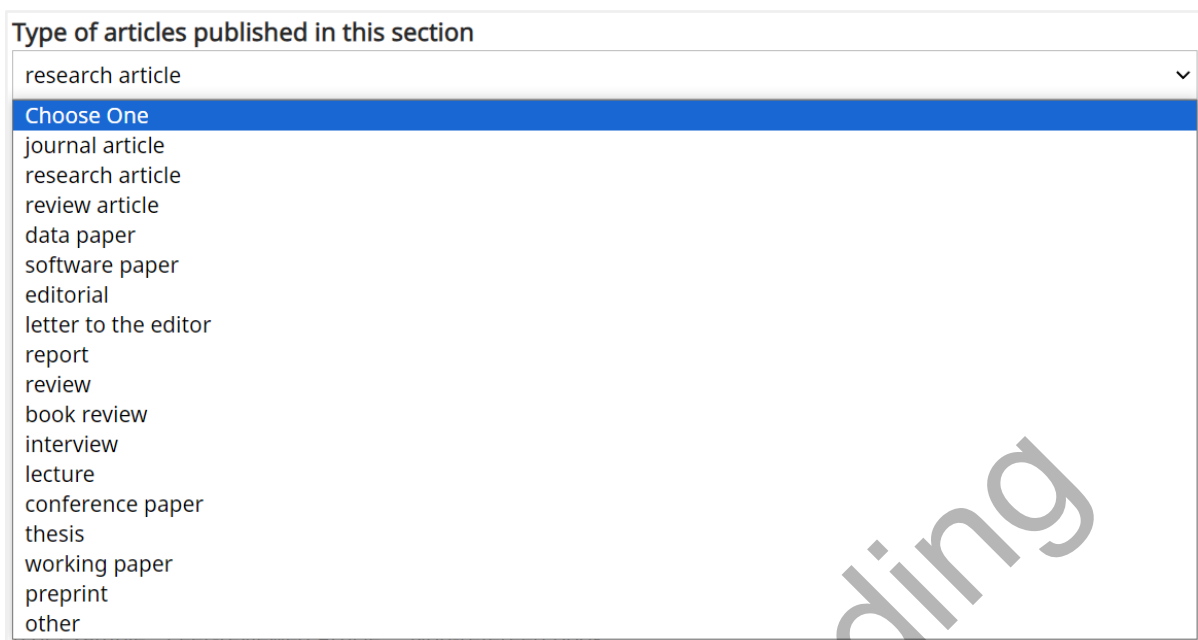


Figure 5: List of genres for specification of article type

At the time of planning the CRAFT-OA roadmap, the plugin was not up to date for the latest version of OJS and no documentation could be found for its use on any platform.

After the start of the CRAFT-OA project, the original plugin was updated to work with the latest version of OJS 3.4.x, maintaining the use of the JATS XML schema.

4.2 OpenAIRE and JATS XML

Unfortunately, since the development of the plugin, OpenAIRE has not implemented full support for JATS XML and the use of the plugin is not straightforward for users and journal editors. The OpenAIRE aggregation team has been contacted and is currently developing and debugging the data collection via the *oai_openaire_jats* schema. When it is finished it will be offered as an additional option to the users and journal editors.

The *oai_openaire_jats* metadata format does not meet the basic requirement of the OpenAIRE Guidelines for Literature Repository Managers v4, which uses the *oai_openaire* metadata format. When using the original plugin, it is not possible to use the validator service (see chapter 6 Validator) provided by the OpenAIRE environment to check the metadata. Validation of this metadata results in error in the validation step *For Usage*.



REPOSITORY						
https://openairetest.craft-oa.muni.cz/index.php/musicologica-brunensia/oai						
VALIDATION TYPE	STATUS	SCORE	STARTED	GUIDELINES	ACTIONS	
OAI Content	finished	0	2024-03-25 13:55:27	For Literature Repositories (4.0)	View Results >	
OAI Usage	finished	0			Resubmit Job 	

Figure 6: Error in the “For Usage” step in OpenAIRE Validator


FOR CONTENT		FOR USAGE			
RULE NAME	RULE DESCRIPTION	RULE WEIGHT	# OF RECORDS	STATUS	
Litv4 Use of OAI_OpenAIRE Metadata Schema (M)	OpenAIRE expects metadata to be encoded in the OpenAIRE metadata format (metadataPrefix oai_openaire) . View guideline	5	0/1	 View Errors	

Figure 7: Validation results in the “For Usage” step in OpenAIRE Validator

Rule: Litv4 Use of OAI_OpenAIRE Metadata Schema (M)

See the list of errors found for this specific rule

[ListMetadataFormats@https://openairetest.craft-oa.muni.cz/index.php/musicologica-brunensia/oai](https://openairetest.craft-oa.muni.cz/index.php/musicologica-brunensia/oai/ListMetadataFormats)

Figure 8: Details of For Usage errors in OpenAIRE Validator

As a result of this error, the subsequent verification of the content does not take place. The user of the validator has no way of checking which metadata is missing or which is incomplete.

4.3 Original plugin modification

Following discussion with the Work Package (WP) 6 manager, the original plugin was modified to meet the requirements of the OpenAIRE Guidelines for Literature Repository Managers v4¹⁴ (see chapter 3.1), so that it was possible to use the services of the validator and aggregate the journal data directly, without having to go through the OpenAIRE Helpdesk. Modifications to the plugin included a change to the metadata format added via `MetadataPrefix`, and also a change to the XML schema generated at output. A feature was also added to modify how the Creative Commons (CC) Licence reference appears in the XML.

4.3.1 New metadataPrefix

When the plugin is enabled in the OJS plugin gallery, an additional metadata format with the metadataPrefix `oai_openaire` is added to the list of metadata formats in the OAI-PMH protocol, which can be listed using the `?verb=ListMetadataFormats` parameter. See <https://cyberpsychology.eu/oai?verb=ListMetadataFormats> for an example.

The setting of the new metadata format is adapted to the namespace and XSD schema used.

- **metadataNamespace:** https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/application_profile.html
- **Schema:** <https://www.openaire.eu/schema/repo-lit/4.0/openaire.xsd>

¹⁴ Schirrwagen & Baglioni (2018).

OAI 2.0 Request Results

[Identify](#) | [ListRecords](#) | [ListSets](#) | [ListMetadataFormats](#) | [ListIdentifiers](#)

You are viewing an HTML version of the XML OAI response. To see the underlying XML use your web browsers view source option. More information about this XSLT is at the [bottom of the page](#).

Datestamp of response	2024-05-23T09:57:11Z
Request URL	https://cyberpsychology.eu/oai

Request was of type ListMetadataFormats.

This is a list of metadata formats available from this archive.

Metadata Format

metadataPrefix	oai_openaire
metadataNamespace	https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/application_profile.html
schema	https://www.openaire.eu/schema/repo-lit/4.0/openaire.xsd

Figure 9: New Metadata Format with metadataPrefix oai_openaire

4.3.2 Modification to XML generator

When the XML generation function was modified, the metadata provided by the original plugin was used and the tags and structure were modified to meet the OpenAIRE 4.0 profile requirements for XML structure.

At the request of OpenAIRE, the display of international standard serial number (ISSN) and electronic ISSN (eISSN) in the <dc:source> tag has been added to the standard profile described in the XSD schema.

```
//ISSN + eISSN
if($printIssn) {
    $response .= "<dc:source>ISSN: " . $printIssn . "</dc:source>";
}
if ($onlineIssn){
    $response .= "<dc:source>eISSN: " . $onlineIssn . "</dc:source>";
}
```

Figure 10: XML extension for ISSN & eISSN in metadataPrefix oai_openaire

A feature to display the CC licence in the required format has also been added. This new feature is an enhancement to the OJS functionality. The existing feature is limited to CC licence version 4.0 and may not be suitable for all journals as some journals might still be using the 3.0 licence.

```

/**
 * Get a mapping of license URL to license locale key for common
 * creative commons licenses.
 *
 * @return array
 */
public static function getCCLicenseOptions()
{
    return [
        'https://creativecommons.org/licenses/by-nc-nd/4.0' => 'submission.license.cc.by-nc-nd4',
        'https://creativecommons.org/licenses/by-nc/4.0' => 'submission.license.cc.by-nc4',
        'https://creativecommons.org/licenses/by-nc-sa/4.0' => 'submission.license.cc.by-nc-sa4',
        'https://creativecommons.org/licenses/by-nd/4.0' => 'submission.license.cc.by-nd4',
        'https://creativecommons.org/licenses/by/4.0' => 'submission.license.cc.by4',
        'https://creativecommons.org/licenses/by-sa/4.0' => 'submission.license.cc.by-sa4'
    ];
}

```

Figure 11: Existing function in OJS for the CC label

```

/**
 * Get the Creative Commons license labels associated with a given
 * license URL.
 * @param $ccLicenseURL URL to creative commons license
 * @param $locale string Optional locale to return badge in
 * @return string HTML code for CC license
 */
public function _getCCLicenseLabel($ccLicenseURL, $locale = null) {
    $licenseKeyMap = array(
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nc-nd/4.0[/]?|' => 'submission.license.cc.by-nc-nd4',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nc/4.0[/]?|' => 'submission.license.cc.by-nc4',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nc-sa/4.0[/]?|' => 'submission.license.cc.by-nc-sa4',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nd/4.0[/]?|' => 'submission.license.cc.by-nd4',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by/4.0[/]?|' => 'submission.license.cc.by4',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-sa/4.0[/]?|' => 'submission.license.cc.by-sa4',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nc-nd/3.0[/]?|' => 'submission.license.cc.by-nc-nd3',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nc/3.0[/]?|' => 'submission.license.cc.by-nc3',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nc-sa/3.0[/]?|' => 'submission.license.cc.by-nc-sa3',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-nd/3.0[/]?|' => 'submission.license.cc.by-nd3',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by/3.0[/]?|' => 'submission.license.cc.by3',
        '|http[s]?://(www\.)?creativecommons.org/licenses/by-sa/3.0[/]?|' => 'submission.license.cc.by-sa3'
    );
    if (is_null($locale)) {
        $locale = Locale::getLocale();
    }

    foreach ($licenseKeyMap as $pattern => $key) {
        if (preg_match($pattern, $ccLicenseURL)) {
            return __($key, [], $locale);
        }
    }
    return null;
}

```

Figure 12: New function in the plugin for the CC label

The modified XML generator covers following metadata:

- 1.a Title (M)
- 1.b Subtitle (MA)
- 2. Creators (M)
- 4. Funding Reference (MA)
- 5. Alternate Identifier (R) – DOI
- 8. Language (MA)
- 9. Publisher (MA)
- 10. Publication date (M)
- 11. Resource Type (M)
- 12. Description (MA)
- 13. Format (R)
- 14. Resource Identifier (M) – Landing Page
- 15. Access Rights (M)
- 17. Subject (MA)
- 18. Licence Condition (R)
- 19. Coverage (R) (in addition to original plugin)
- 20. Size (O)
- 23. File Location (MA)
- 24. Citation Title (R)
- 25. Citation Volume (R)
- 26. Citation Issue (R)
- 27. Citation Start Page (R)
- 28. Citation End Page (R)
- 32. Audience (O) (in addition to original plugin)

In order to get the funding reference metadata working properly, the plugin that provides this information¹⁵ needs to be updated and a new Hook and function needs to be added to provide the funding block in the required format.

New feature for Hook:

```
HookRegistry::register('OAIMetadataFormat_OpenAIREStandard::findFunders',
    array($this, 'addOpenAIREStandardFunderElement'));

/**
 * Hook to OAIMetadataFormat_OpenAIREStandard::findFunders and add funding
 * data to the OpenAIRE OAI
 * @param $hookName string
 * @param $params array
 */
function addOpenAIREStandardFunderElement($hookName, $params) {
    $submissionId = & $params[0];
    $fundingReferences = & $params[1];
    $funderDAO = DAORegistry::getDAO('FunderDAO');
```

¹⁵ The OJS plugin is available at <https://github.com/ajnyga/funding>

```

$funderAwardDAO = DAORegistry::getDAO('FunderAwardDAO');
$publishedSubmission = Services::get('submission')->get($submissionId);
assert($publishedSubmission);
$funders = $funderDAO->getBySubmissionId($publishedSubmission->getId());
while ($funder = $funders->next()) {
    $fundingReferences .= "<oaire:fundingReference>\n";
    $fundingReferences .= "<oaire:funderName>"
        . htmlspecialchars($funder->getFunderName(),
            ENT_COMPAT, 'UTF-8')
        . "</oaire:funderName>\n";
    $fundingReferences .= "<oaire:funderIdentifier funderIdentifierType=\"Crossref Funder ID\">"
        . $funder->getFunderIdentification()
        . "</oaire:funderIdentifier>\n";
    $funderAwards = $funderAwardDAO->getByFunderId($funder->getId());
    while ($funderAward = $funderAwards->next()) {
        $fundingReferences .= "<oaire:awardNumber>"
            . $funderAward->getFunderAwardNumber()
            . "</oaire:awardNumber>\n";
    }
    $fundingReferences .= "</oaire:fundingReference>\n";
}
if ($fundingReferences)
    $fundingReferences = "<oaire:fundingReferences>\n"
        . $fundingReferences
        . "</oaire:fundingReferences>\n";
return $fundingReferences;
}

```

4.3.3 Metadata not included in the generator

Some metadata from the list provided in the Application Profile Overview¹⁶ is not available in OJS or is not intended for journal article content.

The metadata elements not included are as follows:

- 3. Contributor (MA)
- 7. Embargo Period Date (MA)
- 16. Source (R)
- 21. Geo Location (O)
- 22. Resource Version (R)
- 29. Citation Edition (R)
- 30. Citation Conference Place (R)
- 31. Citation Conference Date (R)

¹⁶ See https://guidelines.openaire.eu/en/latest/data/application_profile.html

4.4 Comparison of the two plugins

This section presents the differences in the functioning of the two plugins – the original one that was developed by TSV and the new one that is presented in this deliverable.

Features	Original OJS plugin JATS XML	Alternated OJS plugin OpenAIRE v4.0
OpenAIRE Guidelines support	— (not supported by OpenAIRE Graph yet)	V4.0
Metadata prefix for OAI-PMH	oai_openaire_jats	oai_openaire
Based on XML schema	https://jats.nlm.nih.gov/publishing/0.4/xsd/JATS-journalpublishing0.xsd	https://www.openaire.eu/schema/repo-lit/4.0/openaire.xsd
Additional namespaces		dc, dcterms, datacite, oaire
Display CC licence	CC v4.0 only (in not supported format)	CC v3 and CC v4 (in supported standard format)
Registration in OpenAIRE Provide service	Necessary	Necessary
OpenAIRE Validator service	Not supported	Supported
Controlled vocabulary	COAR Resource Type Genres Vocabulary https://vocabularies.coar-repositories.org/documentation/resource-types/	COAR Resource Type Genres Vocabulary https://vocabularies.coar-repositories.org/documentation/resource-types/

	https://vocabularies.coar-repositories.org/access_rights/	https://vocabularies.coar-repositories.org/access_rights/ Common Education Data Standards vocabulary for Audience https://ceds.ed.gov/element/001492
--	---	---

Table 2: Comparison of original OJS plugin and its alternated version.

4.4.1 Different metadataPrefix display

Metadata Format

metadataPrefix	oai_openaire
metadataNamespace	https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/application_profile.html
schema	https://www.openaire.eu/schema/repo-lit/4.0/openaire.xsd

Figure 13: Metadata format with metadataPrefix oai_openaire

Metadata Format

metadataPrefix	oai_openaire_jats
metadataNamespace	http://jats.nlm.nih.gov
schema	https://jats.nlm.nih.gov/publishing/0.4/xsd/JATS-journalpublishing0.xsd

Figure 14: Metadata format with metadataPrefix oai_openaire_jats

4.4.2 Different XML schema views for the same article

The address used to generate the XML for oai_openaire: https://cyberpsychology.eu/oai?verb=GetRecord&metadataPrefix=oai_openaire&identifier=oai:ojs.journals.muni.cz:article/36754

```
<resource xsi:schemaLocation="http://namespace.openaire.eu/schema/oaire/ https://www.openaire.eu/schema/repo-lit/4.0/openaire.xsd" >
  <datacite:title>
    <datacite:title xml:lang="en" >'I'll be there for you? The bystander intervention model and cyber aggression</datacite:title>
  </datacite:title>
  <datacite:creators>
    <datacite:creator>
      <datacite:creatorName nameType="personal" >Karasavva, Vasileia</datacite:creatorName>
      <datacite:givenName>Vasileia</datacite:givenName>
      <datacite:familyName>Karasavva</datacite:familyName>
      <datacite:affiliation>Department of Psychology, University of British Columbia, Vancouver, BC, Canada</datacite:affiliation>
      <datacite:nameIdentifier nameIdentifierScheme="ORCID" schemeURI="http://orcid.org" >https://orcid.org/0000-0003-0778-8454</datacite:nameIdentifier>
    </datacite:creator>
    <datacite:creator>
      <datacite:creatorName nameType="personal" >Mikami, Amori</datacite:creatorName>
      <datacite:givenName>Amori</datacite:givenName>
      <datacite:familyName>Mikami</datacite:familyName>
      <datacite:affiliation>Department of Psychology, University of British Columbia, Vancouver, BC, Canada</datacite:affiliation>
      <datacite:nameIdentifier nameIdentifierScheme="ORCID" schemeURI="http://orcid.org" >https://orcid.org/0000-0001-5821-0674</datacite:nameIdentifier>
    </datacite:creator>
  </datacite:creators>
  <datacite:alternateIdentifiers>
    <datacite:alternateIdentifier alternateIdentifierType="DOI" >10.5817/CP2024-2-1</datacite:alternateIdentifier>
  </datacite:alternateIdentifiers>
  <dc:language>en</dc:language>
  <dc:source>eISSN: 1802-7962</dc:source>
  <dc:publisher>Masaryk University, Faculty of Social Studies</dc:publisher>
  <datacite:dates>
    <datacite:date dateType="Issued" >2024-04-11</datacite:date>
  </datacite:dates>
  <oaire:resourceType uri="http://purl.org/coar/resource_type/c_2df8fbb1" resourceTypeGeneral="literature" >research article</oaire:resourceType>
  <dc:description xml:lang="en" >The Bystander Intervention Model (BIM) has been validated for face-to-face emergencies and dictates that observers' decision to intervene hinges on five sequential experiences with depression, social anxiety, and cyber aggression either as the target or the aggressor influence bystanders. In our pre-registered study, emerging adults (N = 1,093) viewed pilot-tested cy would take, most participants chose non-intervention (36.3%) or private direct intervention (39.4%). Path analysis suggested that overall, the BIM can explain bystanders' responses to cyber aggression. face applications of the BIM that prescribes barriers to affect only a single specific step, here we found some barriers were negatively linked to multiple steps. These findings elucidate ways in which cy
  </dc:description>
  <dc:format>application/pdf</dc:format>
  <datacite:identifier identifierType="URL" >https://cyberpsychology.eu/article/view/36754</datacite:identifier>
  <datacite:rights identifierType="http://purl.org/coar/access_right/c_abf2" >open access</datacite:rights>
  <datacite:subjects>
    <datacite:subject xml:lang="en" >cyber aggression</datacite:subject>
    <datacite:subject xml:lang="en" >Bystander Intervention Model</datacite:subject>
    <datacite:subject xml:lang="en" >helping</datacite:subject>
    <datacite:subject xml:lang="en" >cyberbullying</datacite:subject>
  </datacite:subjects>
  <oaire:licenseCondition startDate="2024-04-11" uri="https://creativecommons.org/licenses/by-sa/4.0" >CC Attribution-ShareAlike 4.0</oaire:licenseCondition>
  <datacite:sizes>
    <datacite:size>4.69 MB</datacite:size>
  </datacite:sizes>
  <oaire:file accessRightsURI="http://purl.org/coar/access_right/c_abf2" mimeType="application/pdf" objectType="fulltext" >https://cyberpsychology.eu/article/download/36754/32534</oaire:file>
  <oaire:citationTitle>Cyberpsychology: Journal of Psychosocial Research on Cyberspace</oaire:citationTitle>
  <oaire:citationVolume>18</oaire:citationVolume>
  <oaire:citationIssue>2</oaire:citationIssue>
</resource>
```

Figure 15: XML generated with metadataPrefix oai_openaire

The address used to generate the XML for oai_openaire_jats: https://cyberpsychology.eu/oai?verb=GetRecord&metadataPrefix=oai_openaire_jats&identifier=oai:oj.s.journals.muni.cz:article/36754

```

<article dtd-version="1.1d3" article-type="research-article" xml:lang="en" >
  <front>
    <journal-meta>
      <journal-id journal-id-type="ojs" >cyberpsychology</journal-id>
      <journal-title-group>
        <journal-title xml:lang="en" >Cyberpsychology: Journal of Psychosocial Research on Cyberspace</journal-title>
        <trans-title-group xml:lang="cs" >
          <trans-title>Cyberpsychology: Journal of Psychosocial Research on Cyberspace</trans-title>
        </trans-title-group>
        <abbrev-journal-title xml:lang="en" >Cyberpsychology</abbrev-journal-title>
      </journal-title-group>
      <issn pub-type="epub" >1802-7962</issn>
      <publisher>
        <publisher-name>Masaryk University, Faculty of Social Studies</publisher-name>
      </publisher>
    </journal-meta>
    <article-meta>
      <article-id pub-id-type="publisher-id" >36754</article-id>
      <article-id pub-id-type="doi" >10.5817/CP2024-2-1</article-id>
      <article-categories>
        <subj-group xml:lang="en_US" subj-group-type="heading" >
          <subject>Articles</subject>
        </subj-group>
      </article-categories>
      <title-group>
        <article-title xml:lang="en" >I'll be there for you? The bystander intervention model and cyber aggression</article-title>
      </title-group>
      <contrib-group content-type="author" >
        <contrib>
          <name name-style="western" >
            <surname>Karaszova</surname>
            <given-names>Vasileia</given-names>
          </name>
          <xref ref-type="aff" rid="aff-1" ></xref>
          <contrib-id contrib-id-type="orcid" authenticated="true" >https://orcid.org/0000-0003-0778-8454</contrib-id>
        </contrib>
        <contrib>
          <name name-style="western" >
            <surname>Mikami</surname>
            <given-names>Amori</given-names>
          </name>
          <xref ref-type="aff" rid="aff-1" ></xref>
          <contrib-id contrib-id-type="orcid" authenticated="true" >https://orcid.org/0000-0001-5821-0674</contrib-id>
        </contrib>
      </contrib-group>
      <aff id="aff-1" >
        <institution content-type="orgname" >Department of Psychology, University of British Columbia, Vancouver, BC, Canada</institution>
      </aff>
      <pub-date date-type="pub" publication-format="epub" >
        <day>11</day>
        <month>04</month>
        <year>2024</year>
      </pub-date>
      <volume>18</volume>
      <issue>2</issue>
      <permissions>
        <copyright-statement>Copyright © 2024 Vasileia Karaszova, Amori Mikami</copyright-statement>
        <copyright-year>2024</copyright-year>
        <copyright-holder>Vasileia Karaszova, Amori Mikami</copyright-holder>
        <license xlink:href="https://creativecommons.org/licenses/by-nc/4.0/" >
          <license-p>This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License</license-p>
        </license>
        <ali:free_to_read ></ali:free_to_read>
      </permissions>
      <self-uri xlink:href="https://cyberpsychology.eu/article/view/36754" ></self-uri>
      <self-uri content-type="application/pdf" xlink:href="https://cyberpsychology.eu/article/download/36754/32534" ></self-uri>
      <kwrd-group xml:lang="en" >
        <kwrd>cyber aggression</kwrd>
        <kwrd>Bystander Intervention Model</kwrd>
        <kwrd>helping</kwrd>
        <kwrd>cyberbullying</kwrd>
      </kwrd-group>
      <abstract xml:lang="en" >
        <p>The Bystander Intervention Model (BIM) has been validated for face-to-face emergencies and dictates that observers' decision to intervene is either as the target or the aggressor influence bystanders. In our pre-registered study, emerging adults (N = 1,093) viewed pilot-tested cyber aggression analysis suggested that overall, the BIM can explain bystanders' responses to cyber aggression. Nonetheless, there were some discrepancies with multiple steps. These findings elucidate ways in which cyber aggression in the online context may be similar to, as well as different from, aggression in face-to-face contexts. </p>
      </abstract>
      <custom-meta-group>
        <custom-meta specific-use="access-right" >
          <meta-name>open access</meta-name>
          <meta-value>http://purl.org/coar/access_right/c_abf2</meta-value>
        </custom-meta>
        <custom-meta specific-use="resource-type" >
          <meta-name>research article</meta-name>
          <meta-value>http://purl.org/coar/resource_type/c_2df8fbb1</meta-value>
        </custom-meta>
      </custom-meta-group>
    </article-meta>
  </front>
</article>

```

Figure 16: XML generated with metadataPrefix oai_openaire_jats

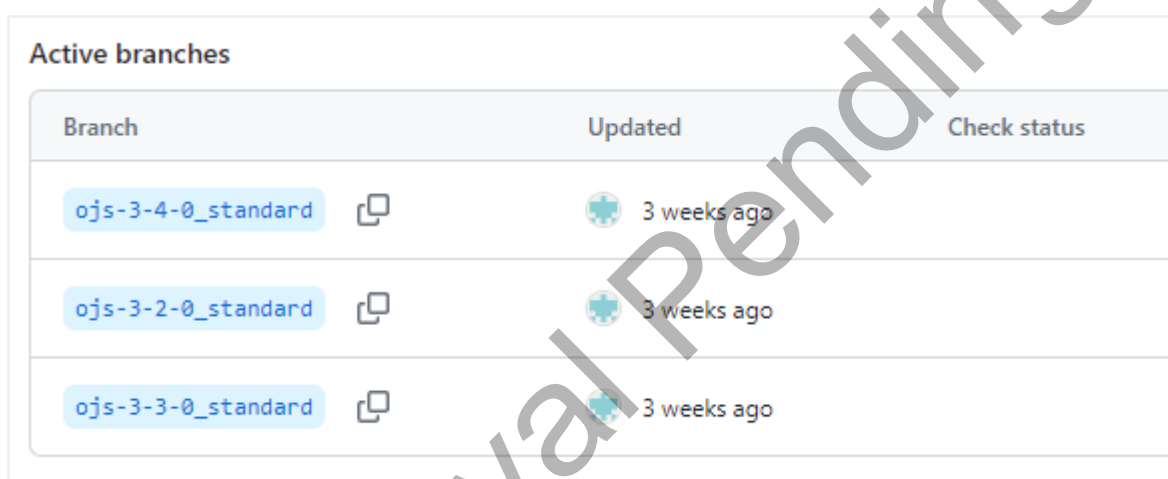
4.5 Plugin availability

The new plugin¹⁷ is publicly available as an open source project Git repository at GitHub: <https://github.com/munipress/openAIREstandard>.

The repository provides access to the full source code and tagged release versions. Three branches are created for the most commonly used versions of OJS 3.2.1, 3.3 and 3.4.

The current plugin maintained versions are:

- 3.2.0 – For running on OJS 3.2.
- 3.3.0 – For running on OJS 3.3.
- 3.4.0 – For running on OJS 3.4.



Branch	Updated	Check status
ojs-3-4-0_standard	3 weeks ago	
ojs-3-2-0_standard	3 weeks ago	
ojs-3-3-0_standard	3 weeks ago	

Figure 17: Active branches in GitHub project

The plugin needs to be downloaded in the version matching the OJS version and added to the plugin set in the `[OJS root folder]/plugins/generic/` folder.

¹⁷ Gomola, R. (2024). *Standard OpenAIRE Guidelines for Literature Repository Managers v4 OJS3 plugin* [Computer software]. <https://github.com/munipress/openAIREstandard>

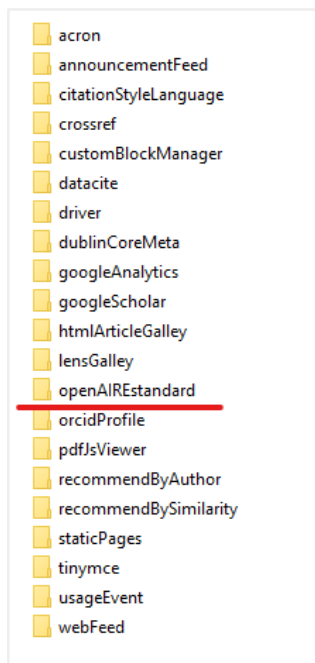


Figure 18: The plugin is listed in the generic folder

The plugin will then appear in the plugins gallery in OJS and can be enabled. When the plugin is active, it is possible to select the article type for each section of the journal according to the COAR Resource Type Vocabulary¹⁸, see Section 4.1 Status description.

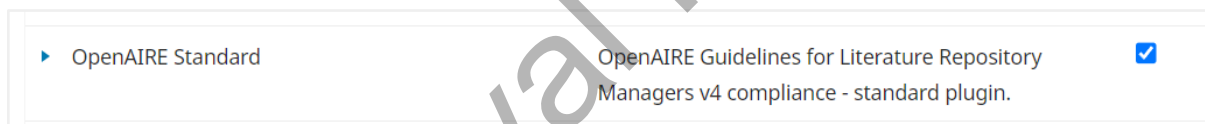


Figure 19: The plugin listed in the Plugins Gallery

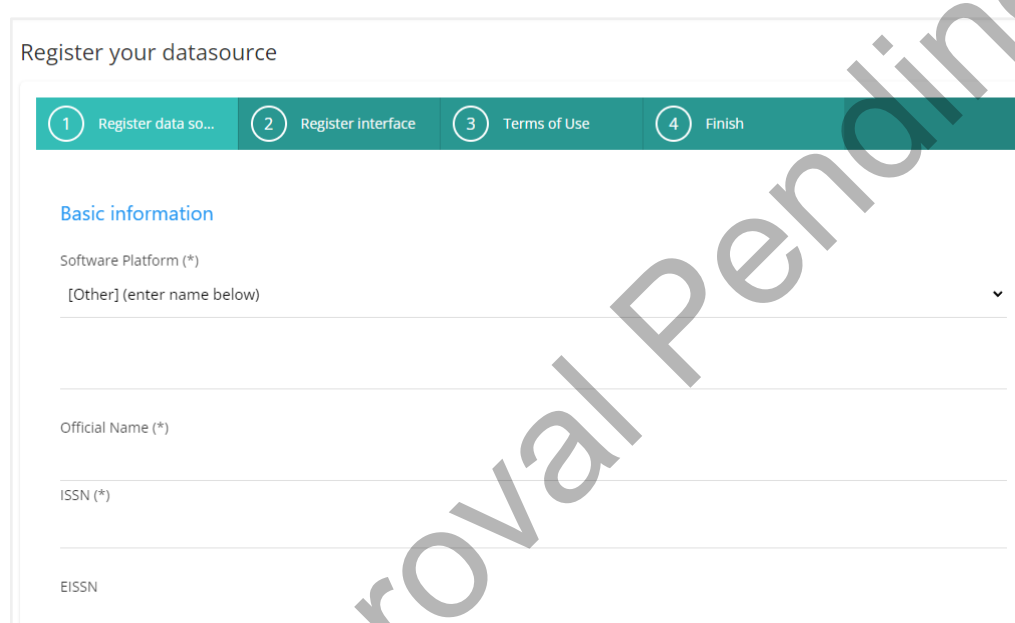
¹⁸ See https://vocabularies.coar-repositories.org/documentation/resource_types/

5 JOURNAL REGISTRATION IN OPENAIRE

This section briefly describes how to register a journal in OpenAIRE.

OpenAIRE provides a dashboard for journal administrators in the OpenAIRE PROVIDE content gateway service¹⁹. First you need to register or log in. During the login process, it is possible to login via different organisations by using the authentication and authorization infrastructure (AAI) login and your institutional account via the eduGAIN interederation service²⁰. Alternatively, if your organisation is not supported, you can create an OpenAIRE account and login via it.

Once you are logged in, there is a short registration process for your journal.



Register your datasource

1 Register data so... 2 Register interface 3 Terms of Use 4 Finish

Basic information

Software Platform (*)
[Other] (enter name below) ▾

Official Name (*)

ISSN (*)

EISSN

Figure 20: Journal registration process

5.1 Registration process

Registration involves three steps:

5.1.1 Basic data about the journal

Data marked (*) are required:

- Software Platform (*)
For our specific case, it is always OJS.
- Official Name (*)
- ISSN (*)

¹⁹ See <https://provide.openaire.eu/home>

²⁰ See <https://edugain.org/>

- EISSN
- LISSN (linking ISSN (ISSN-L))
- Description (*)
- Country (*)
- Longitude
- Latitude
- Entry uniform resource locator (URL) (*)
- Institution (*)
- English Name (*)
- Logo URL
- Timezone (*)
- Data source type (*)
- Admin Email (*)

5.1.2 Interface registration

Interface registration is the most important part of the registration process, setting up the registration profile and data collection page:

- **Base OAI-PMH URL (*)**
The first thing to do is to specify the page from which to retrieve the data. The system will automatically check for the OAI-PMH protocol and check the different journal sections. It is possible to harvest only a specific journal section from the OAI.
- **Set**
It is possible to select which section is to be harvested. If left blank, all articles will be harvested.

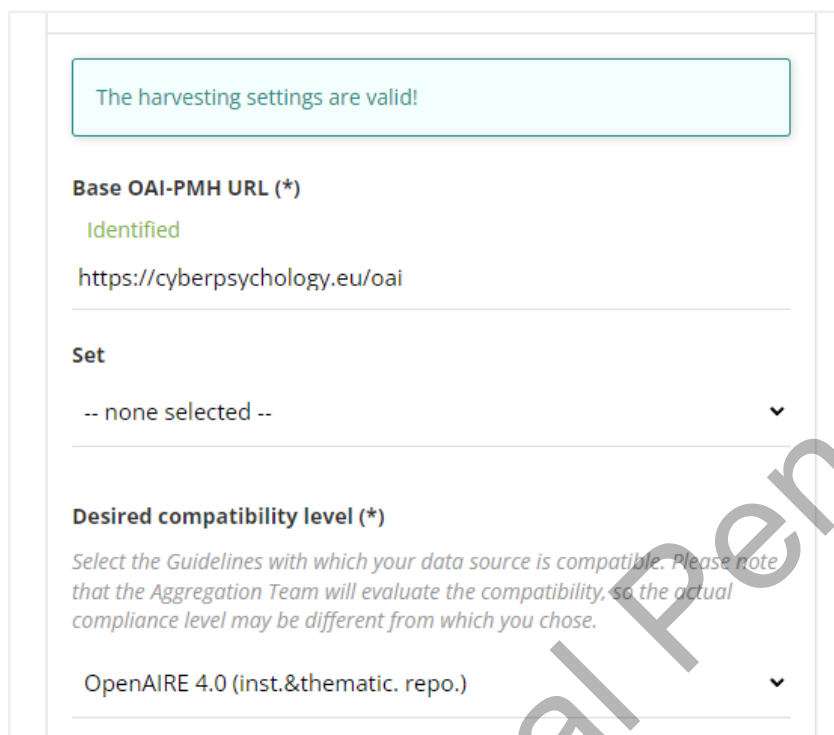


Figure 21: Example of set selection for journal Cyberpsychology (ART is abbreviation for Articles, ED is abbreviation for Editorials)

- **Desired compatibility level (*)**
Setting of the guidelines according to which the data are to be harvested (see Section 3 Introductory notes on the OpenAIRE database). In our case it will always be *OpenAIRE 4.0 (inst. & thematic. repo.)*.
- **Current compatibility level**
Compatibility level returned by the Validator tool after your request to register the interface. This setting is only available after the journal has been registered and validated.
- **Compatibility override**
Actual compatibility level according to the validation process by the OpenAIRE

Aggregation Team. In our case it will also always be OpenAIRE 4.0 (inst. & thematic. repo.). **Comments (What else do we need to know?)**

If the setup is correct, a message is displayed that the OAI protocol configuration is valid and that the harvest settings are correct.



The harvesting settings are valid!

Base OAI-PMH URL (*)
Identified
https://cyberpsychology.eu/oai

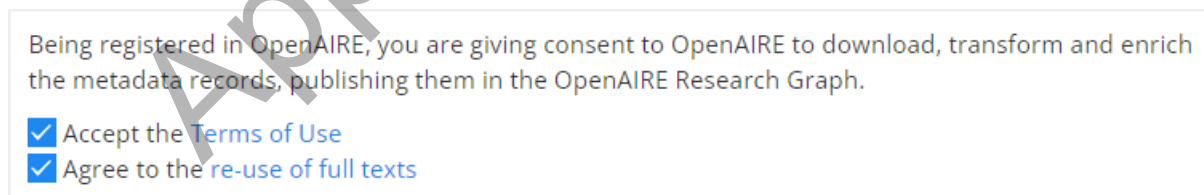
Set
-- none selected --

Desired compatibility level (*)
Select the Guidelines with which your data source is compatible. Please note that the Aggregation Team will evaluate the compatibility, so the actual compliance level may be different from which you chose.
OpenAIRE 4.0 (inst.&thematic. repo.)

Figure 22: Valid harvesting settings

5.1.3 Confirmation of the Terms of Use and data harvesting

In the third step, you then need to confirm the terms of use and the possibility to reuse full texts.



Being registered in OpenAIRE, you are giving consent to OpenAIRE to download, transform and enrich the metadata records, publishing them in the OpenAIRE Research Graph.

Accept the [Terms of Use](#)

Agree to the [re-use of full texts](#)

Figure 23: OpenAIRE Terms of Use

Once the process has been completed, the validation process of the journal is automatically launched in the Validator (see chapter 7), where all the conditions and metadata are checked according to the *OpenAIRE 4.0 guidelines (inst. & thematic repo.)* fully named as “OpenAIRE Guidelines for Literature, institutional, and thematic Repositories v4.0”.

6 EVALUATION

After prior agreement with their editors, the production data of the Masaryk University (MU) journals were added to the production version of OpenAIRE Graph. A total of 34 journals were registered with their production data. All journals passed the validation without any problems. We discuss the article types with journals' editors, and after that the setup was made by the MUNI Journals portal²¹ administrator as a service to the journal editors to speed up data harvesting in OpenAIRE. The plugin version *ojs-3.2.0_standard* has been tested in the production version of OpenAIRE.

The list of journals that have been registered with OpenAIRE by the MU using the new OJS plugin is as follows:

- Anthropologia integra. Journal for general anthropology and related disciplines
https://journals.muni.cz/anthropologia_integra/oai
- Archaeologia historica
<https://journals.phil.muni.cz/archaeologia-historica/oai>
- Bohemica litteraria
<https://journals.phil.muni.cz/bohemica-litteraria/oai>
- Brno Studies in English
<https://journals.phil.muni.cz/bse/oai>
- Brünner Beiträge zur Germanistik und Nordistik
<https://journals.phil.muni.cz/bbgn/oai>
- CASALC Review
<https://journals.muni.cz/casalc-review/oai>
- Cyberpsychology: Journal of Psychosocial Research on Cyberspace
<https://cyberpsychology.eu/oai>
- Czech Journal of Political Science/Political Science Journal
<https://czechpolsci.eu/oai>
- Czech Polar Reports
<https://journals.muni.cz/cpr/oai>
- Czech-polish historical and pedagogical journal
<https://journals.muni.cz/cphjournal/oai>
- History and History Education
<https://journals.muni.cz/dejinyadejepis/oai>
- Discourse and Interaction
<https://journals.muni.cz/discourse-and-interaction/oai>
- Études romanes de Brno
<https://journals.phil.muni.cz/erb/oai>
- Geological Research in Moravia and Silesia
<https://journals.muni.cz/gvms/oai>
- Graeco-Latina Brunensia
<https://journals.phil.muni.cz/graeco-latina-brunensia/oai>

²¹ See <http://journals.muni.cz/>

- Linguistica Brunensia
<https://journals.phil.muni.cz/linguistica-brunensia/oai>
- Masaryk University Journal of Law and Technology
<https://journals.muni.cz/mujlt/oai>
- Museologica Brunensia
<https://journals.phil.muni.cz/museologica-brunensia/oai>
- Musicologica Brunensia
<https://journals.phil.muni.cz/musicologica-brunensia/oai>
- Neograeca Bohemica
<https://journals.phil.muni.cz/neograeca-bohemica/oai>
- Pro-Fil. An Internet Journal of Philosophy
<https://journals.phil.muni.cz/profil/oai>
- ProInflow. Journal for Information Sciences
<https://journals.phil.muni.cz/proinflow/oai>

6.1 OpenAIRE Graph / Explore

OpenAIRE Explore is a visual interpretation of the OpenAIRE Research Graph. It is possible to search for journals and *Data Sources* that have a flag *Compatibility: OpenAIRE PubRepos v4.0*.

Journals used as test journals are searchable and indexed metadata is available for checking. The metadata is a combination of metadata from various sources, one of which is the direct linking of journals to OpenAIRE systems via this plugin. For example the result of the search for journal Cyberpsychology:

<https://explore.openaire.eu/search/find/datasources?fv0=Cyberpsychology:%20Journal%20of%20Psychosocial%20Research%20on%20Cyberspace&f0=q&page=1>

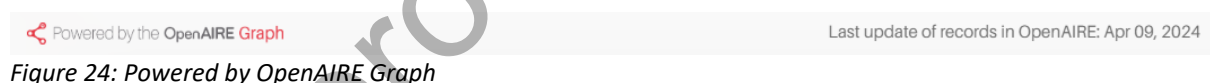




Figure 24: Powered by OpenAIRE Graph

Cyberpsychology: Journal of Psychosocial Research on Cyberspace

Journal • Czech Republic • Compatibility: OpenAIRE PubRepos v4.0 • Partners: MU

Website URL: <https://cyberpsychology.eu/> 


OAI-PMH URL: <https://cyberpsychology.eu/oai> 


Cyberpsychology: Journal of Psychosocial Research on Cyberspace is a diamond open access, online, peer-reviewed scholarly journal published by Masaryk University. The journal is focused on social science research about cyberspace. It brings psychosocial reflections...

Figure 25: Result from Data Sources in OpenAIRE Explore for the journal Cyberpsychology

Sacra

Journal • Czech Republic • Compatibility: OpenAIRE PubRepos v4.0 • Partners: Masaryk University

Website URL: <https://journals.phil.muni.cz/sacra> 

OAI-PMH URL: <https://journals.phil.muni.cz/sacra/oai> 

The peer-reviewed student journal Sacra publishes academic texts in the field of studies of religions and serves as a platform for students and aspiring researchers to publish the outputs of their research projects and theses, as well as to share contacts and practical informatio...

Figure 26: Result from Data Sources in OpenAIRE Explore for the journal Sacra

The journal administrator or editor can see the progress of the aggregation in their dashboard in OpenAIRE PROVIDE. It shows the regularity of the aggregation, the version currently indexed and the number of articles indexed in the OpenAIRE Graph. A dedicated, documented application programming interface (API)²² makes the OpenAIRE Graph data available in real time. Full OpenAIRE Graph data snapshots are regularly archived in the Zenodo repository²³.

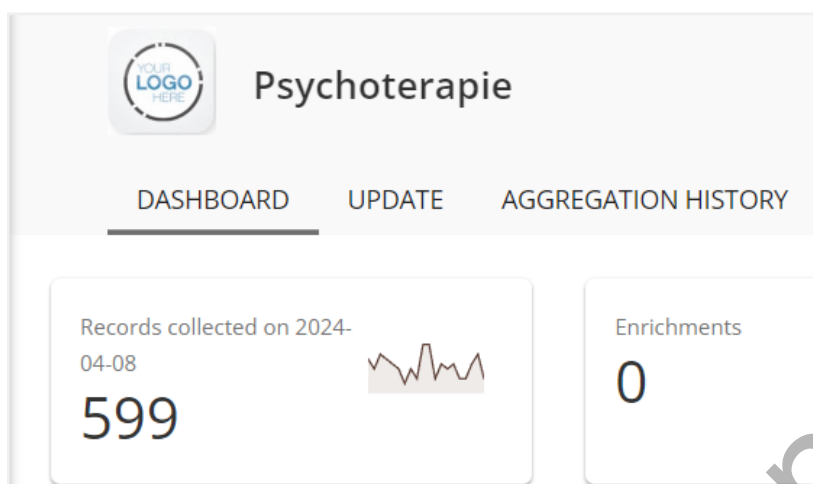


Figure 27: Indexed articles count

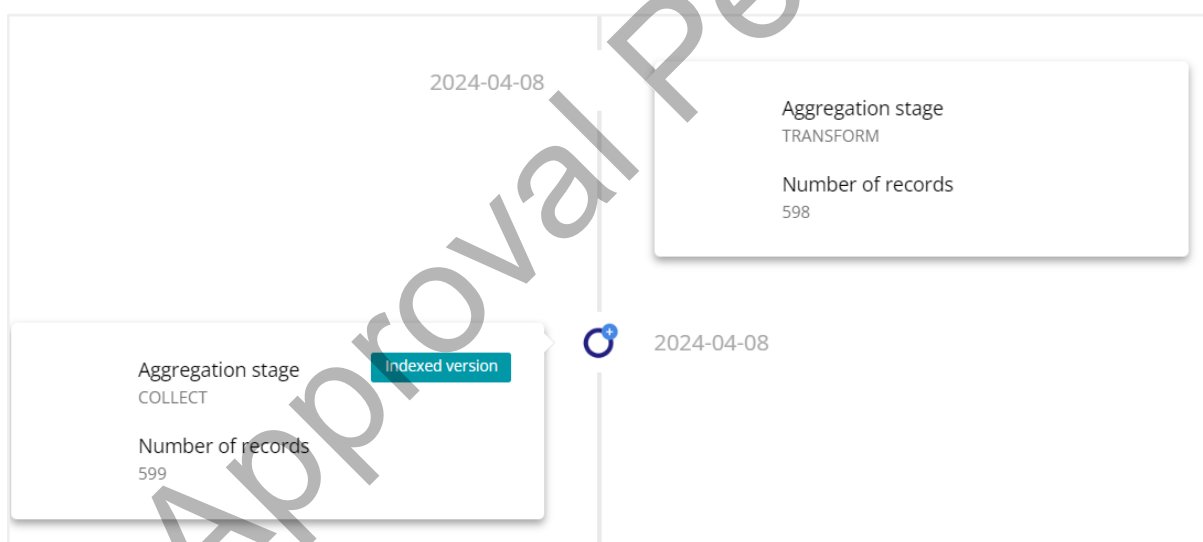


Figure 28: Aggregation history. Indexed version

The results show that linking the journals via the OJS plugin works and that it is possible to insert the *OpenAIRE Graph* metadata in this way without any additional effort. After successful aggregation, further updates will be done automatically. There is no need for the journal administrator to take any further steps.

²² See <https://graph.openaire.eu/docs/apis/home/>

²³ See <https://graph.openaire.eu/docs/downloads/full-graph/>

7 METADATA VALIDATION

The main advantage of using the plugin in combination with OpenAIRE is the use of the validator provided by OpenAIRE. This validator shows any missing metadata. Editors can fill in the missing metadata as required. If necessary, they can run the validation again. After successful validation, the metadata of the journals will be harvested and updated on a regular basis. The user is notified by email when the validation starts.

The validation is carried out on two levels: **Usage** (checking that the metadataPrefix oai_openaire exists) and **Content** (checking that the records correctly contain all the metadata required by OpenAIRE 4.0).

The journal administrator or editor can view the validation status in the **Validation History** tab. A list is displayed showing successful and unsuccessful validations and the score the journal received for the quality of its metadata.

REPOSITORY					
https://journals.phil.muni.cz/studia-paedagogica/oai					
VALIDATION TYPE	STATUS	SCORE	STARTED	GUIDELINES	ACTIONS
OAI Content	finished	96	2024-04-25 09:49:17	For Institutional and Thematic Repositories (4.0)	View Results > Resubmit Job ↻
OAI Usage	finished	100			
REPOSITORY					
https://journals.phil.muni.cz/neograeca-bohemica/oai					
VALIDATION TYPE	STATUS	SCORE	STARTED	GUIDELINES	ACTIONS
OAI Content	finished	100	2024-04-25 09:49:10	For Institutional and Thematic Repositories (4.0)	View Results > Resubmit Job ↻
OAI Usage	finished	100			
REPOSITORY					
https://journals.phil.muni.cz/bbgn/oai					
VALIDATION TYPE	STATUS	SCORE	STARTED	GUIDELINES	ACTIONS
OAI Content	finished	100	2024-04-25 09:49:00	For Institutional and Thematic Repositories (4.0)	View Results > Resubmit Job ↻
OAI Usage	finished	100			

Figure 29: Validation history

The **View Results** action allows the user to scroll through each item and see the number of articles for which each metadata is met and those for which it is not. They can then see the gaps in their metadata, which they can then improve and revalidate. Thanks to OpenAIRE's continuous updates, the level of indexed metadata for individual journals can also be gradually increased.

The Validator is an undeniable bonus for journal editors. It allows them to check their own metadata and its level across articles.



Figure 30: Validation results

8 CONCLUSION

The pre-existing OJS plugin for exporting publication metadata according to the OpenAIRE guidelines has been modified to follow the current OpenAIRE guidelines for journal repositories, including necessary changes as a supplement to the current developing and debugging of the full JATS metadata support in the current OpenAIRE metadata aggregation ecosystem. When updated on the OpenAIRE website, the plugin can be easily adapted to provide JATS metadata as well.

This document provides a detailed description of the design and implementation, as well as the necessary guidance for OJS plugin users on how to install and use it on their OJS instances. The OJS plugin is publicly available as a Git repository hosted on GitHub at <https://github.com/munipress/openAIREstandard> and now supports the current three major OJS versions 3.2.1, 3.3 and 3.4.

The new plugin has been evaluated in the production environment. It is now used by 34 journals published by MU. The metadata of the journals has been successfully validated by the OpenAIRE Validator and aggregated into the OpenAIRE Graph.

Approval Pending

REFERENCES

All references and websites mentioned in the document were last checked for availability on 31.05.2024.

List of References

Controlled Vocabularies for Repositories (2022). *Resource Types 3.1*.

https://vocabularies.coar-repositories.org/documentation/resource_types/ (Accessed 06.05.2024)

Gomola, R. (2024). *Standard OpenAIRE Guidelines for Literature Repository Managers v4 OJS3 plugin* [Computer software]. <https://github.com/munipress/openAIREstandard>

Nygård, A.-J., Vézina, M.-H., & Withanage, D. (2024). *OpenAIRE Guidelines for Literature Repository Managers v4 compatible OJS3 plugin* [Computer software]. <https://github.com/ojsde/openAIRE>

OpenAIRE (2015, 2022). *OpenAIRE Guidelines for Literature Repositories v3*.

https://guidelines.openaire.eu/en/latest/literature/index_guidelines-lit_v3.html

Schirrwagen, J. & Baglioni, M. (2018) *OpenAIRE Guidelines for institutional and thematic repository managers 4.0*. Zenodo. <https://doi.org/10.5281/zenodo.1299203>

List of Websites

- <https://github.com/>
 - <https://github.com/munipress/openAIREstandard>
 - <https://github.com/ojsde/openAIRE>
 - <https://github.com/openaire/guidelines-literature-repositories/tree/master/schemas/4.0>
- <https://journals.muni.cz>
 - <https://cyberpsychology.eu>
 - <https://czechpolsci.eu>
- <https://openairetest.craft-oa.muni.cz/>
- <https://www.openaire.eu/>
 - <https://beta.provide.openaire.eu/home>
 - <https://explore.openaire.eu/>
 - <https://graph.openaire.eu/>
 - <https://guidelines.openaire.eu/en/latest/>
 - <https://provide.openaire.eu/home>
 - https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/application_profile.html



- <https://openaire-guidelines-for-literature-repository-managers.readthedocs.io/en/v4.0.0/introduction.html>
- <https://www.openaire.eu/blogs/open-journal-systems-ojs-sets-new-standards-to-achive-openaire-compliance-with-jats>
- <https://www.openaire.eu/schema/repo-lit/4.0/openaire.xsd>
- <https://www.openarchives.org/pmh/>

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