



# **VZG-Project Colibri**

## **Sub-Project Coli-Conc**

### **An EZB-DDC Concordance**

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Uma. Balakrishnan

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**VZG**

Verbundzentrale des  
Gemeinsamen Bibliotheksverbundes (VZG)  
Platz der Göttinger Sieben 1  
D-37073 Göttingen  
<http://www.gbv.de/>



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[ <http://cdn.physorg.com/newman/gfx/news/2006/researchersd.jpg> ]

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## 1. INTRODUCTION

The Project “National Licences” is a federal program sponsored by the German Research Foundation (DFG). Under this project central and uniform access to electronic resources is provided to institutions and private persons in Germany. The Verbundzentrale des GBV (VZG), the headquarters of the library network, GBV, supports and hosts millions of licensed digital data of more than 800 libraries under its umbrella, including the journals of the project “National Licences” and is responsible for ensuring that these resources are made searchable and available to the users of the system [1].

Most of the access to the library holdings today is through specialized Internet gateways. This is more so in the case of journals. Internet information gateways typically use a classification system to present a hierarchical, pragmatic, and easily searchable system for their users. Among these classification systems, the Dewey Decimal Classification (DDC) [2] is arguably the most widely used classification system in the world today.

However, these Internet information gateways do not use a standard classification system, e.g., like the Dewey Decimal Classification (DDC) in its entirety, but prefer to use subject specialized schemes and controlled vocabularies, or in many cases locally produced schemes, keeping in view their users requirements. However, in all cases, there is an underlying general scheme that is applied.

In German libraries, the organisation of knowledge has been done for historical, cultural and other reasons under local classification schemes like the Basisklassifikation (BK) [3] and Regensburger Verbundklassifikation (RVK) [4] for a long period of time. But given the international trends and the need to search for both German as well as international literature, a compromise solution is to provide



for a mapping of an international general classification system (e.g., DDC) to local systems (BK, RVK, etc).

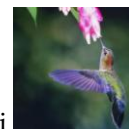
It is in this context in November 2009, the mapping of the classification system “Elektronische Zeitschriftenbibliothek” (EZB) to the DDC system and vice versa was desired and taken up by the VZG- project Colibri for the project “National Licences”, with a specific focus on providing access to online journals both with DDC and EZB [5] classification systems.

## 2. THE CLASSIFICATION SYSTEMS: EZB AND DDC

The service “Elektronische Zeitschriftenbibliothek” was developed in the year 1997 by the University library Regensburg in co-operation with the Technical University Munich within the scope of a project sponsored by the “Bayerisches Staatsministerium für Unterricht, Kultus, Wissenschaft und Kunst”. The project aimed at improving conditions in providing an easy access to and for an effective use of electronic journals, both academic and scientific. Academic online publications and e-journals are made available by the EZB as collection of links that are organised under 41 “Fachgebiete” (subject fields) [6].

The classification system of the EZB is an adopted version of the Regensburger Verbundklassifikation (RVK), however with just one level, i.e., without any deeper hierarchal structure like the RVK . The DDC system on the other hand to which the EZB system has been mapped to in the current project is a deep structured, mono-hierarchical universal classification system that has on its top level ten main classes each with ten divisions, which in turn contains ten sections and so forth. Further it also uses some aspects of faceted classification systems .

For example, the EZB class “Romanistik” (Romance languages and literature) equally



covers Italian and Spanish literature and languages, whereas in the DDC system the resources of these subjects are classified under six DDC classes “440 French & related languages”, “450 Italian, Romanian & related languages”, “460 Spanish & Portuguese languages”, “840 French & related literatures”, and “850 Italian, Romanian & related literatures”, and “860 Spanish & Portuguese literatures” with finer divisions and sections respectively. Figure 1. illustrates the major differences between the EZB and DDC system:

<b>Elektronische Zeitschriftendatenbank (EZB)</b>	<b>Dewey Decimal Classification (DDC)</b>
<b>Structure</b>	
One-level classification system	A fine and deep structured classification
<b>Usage</b>	
Only for journals and online resources	For all kinds of publications
Only in Germany	World-wide use
<b>Elements of Notations</b>	
Letters or combination of letters (A - Z)	Arabic numerals, decimal point after the first three digits (in the case of more than 3 digits), parentheses for options, square brackets for re-located, unassigned notations, segmentation marks {0-9, ., (), [], ', /}
<b>Hierarchy</b>	
No hierarchy, since the classification system is confined to just one level	A mono-hierarchical classification with faceted components
<b>Examples of Notations</b>	
E, AZ, LD-LG	400, 010, 930.1

**Figure 1. Major differences between the EZB and the DDC system**



### 3. MAPPING PROCEDURE

The first issue that came up during the mapping process was the level of automation that would be needed in terms of generating the closest EZB class corresponding to one or more DDC classes. But the EZB system being a small classification system and since the reverse mapping was to be limited to the first three-level hierarchy of the DDC, it was decided the intellectual method would suffice, however, making use of the online availability of each of the classification systems. Following steps were undertaken to create this concordance:

- Access to MelvilClass – the online German DDC system [7]
- Access to WebDewey – the online English DDC system [8]
- Identify terms in each class of the EZB, RVK and DDC system
- Search for SWD [9] and LSCH [10] terms in MelvilClass and WebDewey resp.
- Search with free-text and SWD terms in the EZB
- Search for journals with DDC notations and identify the index terms assigned to the results
- Search for journals in the EZB with the identified terms
- Match the results with the captions/linked SWD terms of each of the DDC classes.
- List out all possible concordance classes
- Process the list to find the most equivalent classes
- Build the concordance table
- Determine for each class the type of correlation relationship (from 1:1 to 1:m) and the percentage of the relationships between the classes of the two classification systems.



## 4. PHASES OF MAPPING

The mapping process involved two phases.

### **Phase I**

In the first phase, the 41 classes of the EZB system were mapped to DDC classes and in this process the EZB classes served as source. The EZB system is – as already mentioned – just an one-level classification system.

### **Phase II**

In the second phase, reverse mapping was carried out, i.e., from the DDC to the EZB system. In this phase the DDC system acted as the source and the EZB system was the target classification system. DDC being a finer structured classification system than the EZB, it was found, that the mapping could not be just confined to the top level of hierarchies, but have to be moved deeper to local classes of the hierarchy to assure that all classes of the DDC hierarchy are represented at least once in one of the EZB classes.

Some of the DDC classes that are re-located and represented in square brackets in the DDC system have also been considered in this concordance for the potential retrieval of older documents that have been assigned with these, but now obsolete DDC classes.

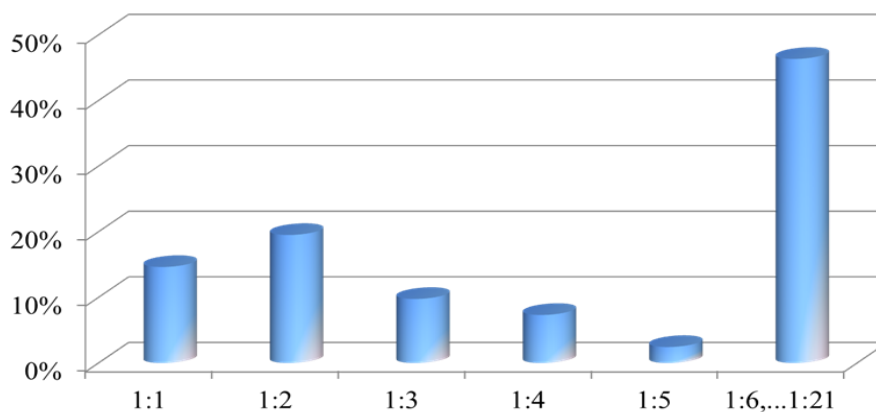


## 5. DETERMINATION OF THE MAPPING RELATIONSHIPS

In the current mapping six different types of correlation relationships between the mapped classes were determined (1:1, 1:2, 1:3, 1:4, 1:5, and 1:m, where  $m = 6, \dots, 21$ ).

Figure 2. below shows the percentage of these relationships between the DDC and EZB classes.

No.	NUMBER OF CLASSES	n:m RELATIONSHIP		PERCENTAGE
			EZB : DDC	
1	6		1:1	14.63 %
2	8		1:2	19.51 %
3	4		1:3	9.76 %
4	3		1:4	7.32 %
5	1		1:5	2.44 %
6	19		1:6, ..., 1:21	46.34 %
<b>41 classes</b>				<b>100 %</b>







## Figure 2. Types and percentage of the correlation relationships between the EZB and the DDC classes

The classification system EZB contains 41 classes. In six classes of all EZB classes, there is an one-to-one mapping possible, which makes 14.63 % of the whole EZB-DDC concordance (No. 1). An one-to-two relationship is found in eight classes, which is 19.51 % (No. 2), an one-to-three relationship occur four times, resulting in 9.76 % (No. 3) and an one-to-four relationship occur three times, which makes 7.32 % (No. 4). Finally, an one-to-five relationship occurs once i.e., in 2.44 % (5) of all cases and in nineteen cases (46.34%) there is an one-to-m mapping relationship (No. 6), where  $m > 5$ . The Figure 2 shows that in 53.66% of the cases, i.e., in more than half of the cases, the concordance between EZB and DDC classes could be built with 1:1 up to 1:5 mapping relationships.

## 6. ISSUES IN MAPPING THE EZB SYSTEM TO THE DDC SYSTEM

In general, mapping different classification and indexing systems throw up multiple challenges. The cultural and historical background of classification systems play a vital role in their development and usage. This often leads to structural, conceptual and linguistic differences between them, that make mapping efforts complex and tedious. In this case, the EZB system, a local and simple system differs both in its structure and in detail from the DDC system. The DDC system is not only extensive, but also fine-structured with faceted components. Further, although the EZB system is based on the RVK, its structure does not reflect fully the structure of the RVK. The difference in the structural logic of the EZB system compared to the RVK could probably be due to the subject areas of the currently available online journals in the participating libraries of the EZB system and also the need to provide just an one-level system. For example, the Figure 3 below shows that the RVK main schedule



“ZG-ZS Technik” has been split into six separate classes and differently structured in the EZB .

<b>EZB system</b>	<b>RVK system</b>
Architektur, Bauingenieur- und Vermessungswesen (ZH-ZI)	ZH, ZI
Elektrotechnik, Mess- und Regelungstechnik (ZN)	ZN
Energie, Umweltschutz, Kerntechnik (ZP)	ZP
Maschinenwesen, Werkstoffwissenschaften, Fertigungstechnik, Bergbau u. Hüttenwesen, Verkehrstechnik, Feinwerktechnik (ZL)	ZL
Technik allgemein (ZG)	ZG
Verfahrenstechnik, Biotechnologie, Lebensmitteltechnologie (ZM)	ZM
-	ZK Bergbau und Hüttenwesen
-	ZO Verkehr, Transport
(ZN)	ZQ Messtechnik, Steuerungs- und Regelungstechnik, Automatisierungstechnik; Mechatronik
(ZM)	ZS Handwerk und Gewerbe. Verschiedene Technologien

**Figure 3: Structural difference between the EZB and the RVK system**



Similarly, the RVK main schedule “D Pädagogik” with 23 divisions from DA to DZ is represented in the EZB system with just two “Fachgebieten” (subject areas) “D Pädagogik” and “DD Bildungsgeschichte”.

### **Other Issues**

The examples below expose other issues experienced in this mapping.

#### **Example 1:**

Depending on the aspect of the subject on the “Disposal of the Dead” literature is classified into one of the DDC main classes “300 Social sciences” or “600 Technology”. The specific subdivisions are “363.75 Disposal of the dead” and “614.6 Disposal of the dead”, respectively. However, in the EZB system, there is no obvious class where this topic could be accommodated.

#### **Example 2:**

The EZB system classifies journals of “Arts” into the class “Kunstgeschichte (History of Arts), since there seems to fail a class just for “Arts”. An example is the journal “Artechock Kunstmagazin” that is classified into the EZB class “Kunstgeschichte”, which is misleading, as the journal does not deal with any historical aspect of Arts. The journal serves as an information magazine on the on-going art and cultural programmes in Germany. This example shows, that it would be more appropriate here to have a class “Kunst” (Arts) rather than “Kunstgeschichte” (History of Arts), that could accommodate literature both on arts and history of arts.

Also, the literature on theatre and stage performances that are at present classified into “AZ Allgemeines, Fachübergreifendes” or “AP Medien- und Kommunikationswissenschaften, Publizistik” in the EZB system, could be coupled with a class “Kunst”, if this class could be expanded to an EZB class “Kunst und Theater”.

**Example 3:**

The aspects vacation, games, entertainment & recreation that are dealt in the DDC under the main class “700 Arts & recreation” is an example where an exact one-to-one mapping to the EZB system is not possible. This subject is dispersed in various classes of the EZB system, i. e., from “Q Wirtschaftswissenschaften” (Economics), “WW-YZ Medizin” (Medicine), “MN-MS Soziologie” (Sociology), “AP Medien- und Kommunikationswissenschaften, Publizistik” (Media and communication sciences ,journalism) to “AZ Allgemeines, Fachübergreifendes” (General, interdisciplinary). “Vacation, games & entertainment or recreation” does not exist in the sense “Leisure and relaxation” in the EZB system as it is in the case of the DDC . There is no “Fachgebiet”(subject area) for this aspect in the DDC system.

## 7. CONCLUSION

The current mapping work was undertaken for the project “National Licences”.

This mapping work involved creating a concordance between EZB and the DDC system . The effort in creating such a concordance brought out the complexities that result from the significant disparity in the structure of EZB and DDC . The classification system of the EZB is extremely simple with just 41 classes without a hierarchical structure designed for local needs whereas the DDC system is an universal classification system that attempts to cover all human knowledge with a deep-level, mono-hierarchical system combined with faceted elements. This disparity in the relative structures of the two classification systems is also one of the main reasons for the frequent absence of one-to-one mappings. The Figure 2. makes the dissimilarity of the two systems apparent by showing the percentage of different types of correlation of these two systems .



Although the EZB system is a very small classification system, mapping it with a large and universal system like the DDC system is a time-consuming task, especially when a bidirectional mapping is carried out. The reverse mapping, i.e., from the DDC to the EZB system brings to fore all the issues involved in such mapping work , as discussed in “Issues in mapping the EZB system to the DDC system”.

The results of this mapping could be used for:

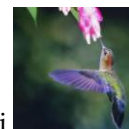
- assigning DDC notations to the EZB title data records or vice versa
- providing interoperability (cross-browsing) between the two systems
- analysing the mapping results

**Suggestions for further improvement are most welcome and can be sent to [uma.balakrishnan@gbv.de](mailto:uma.balakrishnan@gbv.de)**

## APPENDICES

### A. References (Links accessed June 2011)

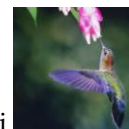
- [1] *Project National Licences. Technical implementation by the Verbundzentrale des GBV (VZG)*, <http://www.nationallizenzen.de/>
- [2] *Dewey Decimal Classification (DDC)*  
[http://en.wikipedia.org/wiki/Dewey\\_Decimal\\_Classification](http://en.wikipedia.org/wiki/Dewey_Decimal_Classification)
- [3] *Basisklassifikation (BK)*  
<http://www.gbv.de/vgm/info/mitglieder/02Verbund/01Erschliessung/02Richtlinien/05Basisklassifikation/index>
- [4] *Regensburger Verbundklassifikation (RVK)*  
[http://rzbvm001.uni-regensburg.de/sepp/rvko\\_neu/](http://rzbvm001.uni-regensburg.de/sepp/rvko_neu/)



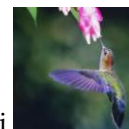
- [5] *Elektronische Zeitschriftenbibliothek (EZB)* <http://rzblx1.uniregensburg.de/ezeit/>
- [6] *Information zur Elektronische Zeitschriftendatenbank*  
<http://ezb.uni-regensburg.de/about.phtml>
- [7] *MelvilClass* <<http://melvil.d-nb.de/melvilclass-login>>  
*Information on Melvil* <http://melvil.d-nb.de/>
- [8] *WebDewey* <<http://connexion.oclc.org/>>  
*Information on WebDewey* <http://www.oclc.org/dewey/versions/webdewey/>
- [9] *Schlagwortnormdatei (SWD)* <http://melvil.d-nb.de/swd>
- [10] *Library of Subject Headings (LCSH)* <http://connexion.oclc.org/>
- [11] *SWB Online Katalog* <http://swb.bsz-bw.de/>

## B. EZB - DDC concordance

Nr.	EZB Fachgebiete	EZB Notation	DDC Notation	DDC Notation for the display in the title data	DDC Caption
1	Allgemeine und vergleichende Sprach- und Literaturwissenschaft. Indogermanistik. Außereuropäische Sprachen und Literaturen	E	051 -059		General serial publications in specific languages and language families
		E	081-089		General collections in specific languages and language families
		E	400	400	Languages
		E	410	410	Linguistics
		E	490	490	Other languages
		E	800	800	Literature (Belles-lettres) and rhetoric
		E	879		Literatures of other Italic languages
		E	890	890	Literatures of other specific languages and language families
2	Allgemeines,	AZ	061-068		General organizations

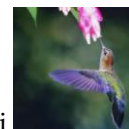


	Fachübergreifendes	AZ	010	<b>010</b>	Bibliographies
		AZ	030	<b>030</b>	Encyclopedias & books of facts
		AZ	050	<b>050</b>	Magazines, journals & serials
		AZ	080	<b>080</b>	Quotations
		AZ	790		Recreational and performing arts
		AZ	791		Public performances
		AZ	792		Stage presentations
		AZ	793		Indoor games and amusements
3	Anglistik. Amerikanistik	H	420	<b>420</b>	English & Old English languages
		H	810	<b>810</b>	American literature in English
		H	820	<b>820</b>	English and Old English (Anglo-Saxon) literatures
4	Archäologie	LD-LG	930.1		Archaeology
5	Architektur, Bauingenieur- und Vermessungswesen	ZH-ZI	380	<b>380</b>	Communication and transportation
		ZH-ZI	526		Mathematical geography
		ZH-ZI	620.1		Engineering mechanics and materials
		ZH-ZI	624		Civil engineering
		ZH-ZI	625		Engineering of railroads and roads
		ZH-ZI	627		Hydraulic engineering
		ZH-ZI	628		Sanitary and municipal engineering Environmental protection engineering.
		ZH-ZI	690	<b>690</b>	Building & construction
		ZH-ZI	710	<b>710</b>	Landscaping & area planning
		ZH-ZI	720	<b>720</b>	Architecture
		ZH-ZI	747		Interior decoration
6	Bildungsgeschichte	DD	370.8		History and description with respect to kinds of persons
		DD	370.9		Historical, geographic, persons treatment
7	Biologie	W	570	<b>570</b>	Life sciences Biology
		W	580	<b>580</b>	Plants (Botany)
		W	590	<b>590</b>	Animals (Zoology)
8	Chemie und Pharmazie	V	540	<b>540</b>	Chemistry
		V	551.9		Geochemie
		V	615.1		Drugs (Materia medica)
		V	615.2 – 615.3		Specific drugs and groups of drugs
		V	615.4		Prescription filling
		V	615.9		Toxicology
		V	660	<b>660</b>	Chemical engineering
9	Elektrotechnik, Mess- und Regelungstechnik	ZN	621.3		Electrical, magnetic, optical, communications, computer engineering; electronics, lighting Nanotechnology
		ZN	629.8		Automatic control engineering
		ZN	681		Precision instruments and other devices
10	Energie, Umweltschutz,	ZP	621.042		Energy engineering
		ZP	621.1		Steam engineering
		ZP	621.2		Hydraulic-power technology

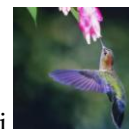


	Kerntechnik	ZP	621.402		Heat engineering
		ZP	621.44		Geothermal engineering
		ZP	621.45		Wind engines
		ZP	621.47		Solar-energy engineering
		ZP	621.48		Nuclear engineering
		ZP	628		Sanitary and municipal engineering Environmental protection engineering
11	Ethnologie (Volks- und Völkerkunde)				
		LA-LC	301		Sociology and anthropology
		LA-LC	305.8		Ethnic and national groups
		LA-LC	325		International migration and colonization
		LA-LC	326		Slavery and emancipation
		LA-LC	369.3		Ethnic clubs
		LA-LC	390	<b>390</b>	Customs, etiquette, folklore
	LA-LC	642		Meals and table service	
12	Geografie und Reisen	R	910	<b>910</b>	Geography and travel
		R	526		Mathematical geography
13	Geowissenschaften	TE-TZ	526		Mathematical geography
		TE-TZ	548		Crystallography
		TE-TZ	549		Mineralogy
		TE-TZ	550	<b>550</b>	Earth sciences & geology
		TE-TZ	560	<b>560</b>	Fossils & prehistoric life
		TE-TZ	622		Mining and related operations
		TE-TZ	665		Technology of industrial oils, fats, waxes, gases
14	Germanistik Niederländische Philologie. Skandinavistik	G	430	<b>430</b>	Germanic languages German
		G	830	<b>830</b>	Literatures of Germanic languages German literature
15	Geschichte	N	326		Slavery and emancipation
		N	900	<b>900</b>	History
		N	920	<b>920</b>	Biography, genealogy, insignia
		N	930-990		History of ancient world; of specific continents, countries, localities; of extraterrestrial worlds
16	Informatik	SQ-SU	000		Computer science, information, general works
		SQ-SU	003		Systems
		SQ-SU	004 - 006		Computer science; computer programming, programs, data; special computer methods
		SQ-SU	621.39		Computer engineering
17	Informations-, Buch- und Bibliothekswesen, Schrift- und Handschriftenkunde	AN	002		The book
		AN	020	<b>020</b>	Library and information sciences
		AN	090	<b>090</b>	Manuscripts, rare books, other rare printed materials
		AN	411		Writing systems of standard forms of languages
18	Klassische Philologie. Byzantinistik.	F	470	<b>470</b>	Italic languages Latin
		F	480	<b>480</b>	Hellenic languages Classical Greek

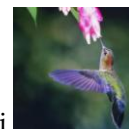




	Mittellateinische und neugriechische Philologie. Neulatein	F	870	<b>870</b>	Literatures of Italic languages Latin literature
		F	880	<b>880</b>	Literatures of Hellenic languages Classical Greek literature
19	Kunstgeschichte	LH-LO	700	<b>700</b>	The arts Fine and decorative arts
		LH-LO	730	<b>730</b>	Sculpture, ceramics & metalwork
		LH-LO	740	<b>740</b>	Drawing & decorative arts
		LH-LO	750	<b>750</b>	Painting
		LH-LO	760	<b>760</b>	Graphic arts
		LH-LO	770	<b>770</b>	Photography & computer art
20	Land-und Forstwirtschaft, Gartenbau, Fischereiwirtschaft, Hauswirtschaft, Ernährung	ZA-ZE	630	<b>630</b>	Agriculture
		ZA-ZE	640	<b>640</b>	Home and family management
21	Maschinenwesen, Werkstoffwissenschaften, Fertigungstechnik, Bergbau u. Hüttenwesen, Verkehrstechnik, Feinwerktechnik	ZL	620		Engineering and allied operations
		ZL	621.1		Steam engineering
		ZL	621.402		Energy engineering
		ZL	621.406		Turbines
		ZL	621.42		Stirling engines and air motors
		ZL	621.43		Internal-combustion engines
		ZL	621.46		Electric and related motors
		ZL	621.5		Pneumatic, vacuum, low-temperature technologies
		ZL	621.8		Machine engineering
		ZL	621.9		Tools
		ZL	622		Mining and related operations
		ZL	623		Military and nautical engineering
		ZL	629		Other branches of engineering
		ZL	666		Ceramic and allied technologies
		ZL	669		Metallurgy
ZL	670	<b>670</b>	Manufacturing		
ZL	680	<b>680</b>	Manufacture for specific uses		
22	Mathematik	SA-SP	510	<b>510</b>	Mathematics
23	Medien- und Kommunikationswissenschaften,	AP	070	<b>070</b>	Documentary media, educational media, news media; journalism; publishing
		AP	302.2		Communication
		AP	384		Communications Telecommunication
		AP	790		Recreational and performing arts
		AP	791		Public performances

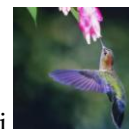


	Publizistik	AP	792		Stage performances
24	Medizin	WW-YZ	610	610	Medicine & health
25	Musikwissenschaft	LP-LZ	780	780	
26	Naturwissenschaft allgemein	TA-TD	500	500	Science
27	Pädagogik	D	370	370	Education
		D	649.1		Child rearing
28	Philosophie	CA-CI	100	100	Philosophy
		CA-CI	110	110	Metaphysics
		CA-CI	120	120	Epistemology
		CA-CI	140	140	Philosophical schools of thought
		CA-CI	160	160	Logic
		CA-CI	170	170	Ethics
		CA-CI	180	180	Ancient, medieval & eastern philosophy
		CA-CI	190	190	Modern western and other non-eastern philosophy
29	Physik	U	520	520	Astronomy
		U	530	530	Physics
		U	548		Crystallography
		U	551		Geology, hydrology, meteorology
		U	620.2		Sound and related vibrations
		U	620.3		Mechanical vibration
		U	620.4		Engineering for specific kinds of geographic environments, fine particle and remote control technology, surface engineering
		U	620.5		Nanotechnology
		U	621		Applied physics
30	Politologie	MA-MM	320	320	Political science (Politics and government)
		MA-MM	335		Socialism and related systems
		MA-MM	350	350	Public administration and military science
31	Psychologie	CL-CZ	130	130	Parapsychology and occultism
		CL-CZ	150	150	Psychology
32	Rechtswissenschaft	P	340	340	Law
		P	614.1		Forensic medicine
33	Romanistik	I	440	440	French & related languages
		I	450	450	Italian, Dalmatian, Romanian, Rhaetian, Sardinian, Corsican
		I	460	460	Spanish and Portuguese languages
		I	840	840	French & related literatures

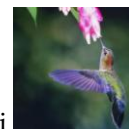


		I	850	<b>850</b>	Italian, Romanian & related literatures
		I	860	<b>860</b>	Literatures of Spanish and Portuguese languages Spanish literature
34	Slavistik	K	491.8		East Indo-European and Celtic languages
		K	891.8		Slavic (Slavonic) literatures
35	Soziologie	MN-MS	300	<b>300</b>	Social Sciences
		MN-MS	310	<b>310</b>	Statistics
		MN-MS	325		International migration and colonization
		MN-MS	326		Slavery and emancipation
		MN-MS	327		International relations
		MN-MS	334		Cooperatives
		MN-MS	360	<b>360</b>	Social problems & social services
		MN-MS	390		Customs, etiquette & folklore
		MN-MS	649		Child rearing; home care of persons with disabilities and illnesses
36	Sport	ZX-ZY	613.66		Self-defense
		ZX-ZY	613.7		Physical fitness
		ZX-ZY	649.57		Exercise, gymnastics, sports
		ZX-ZY	794		Indoor games of skill
		ZX-ZY	796		Athletic and outdoor sports and games
		ZX-ZY	797		Aquatic and air sports
		ZX-ZY	798		Equestrian sports and animal racing
		ZX-ZY	799		Fishing, hunting, shooting
37	Technik allgemein	ZG	600	<b>600</b>	Technology
38	Theologie und Religionswissenschaft	B	200	<b>200</b>	Religion
39	Verfahrenstechnik, Biotechnologie, Lebensmitteltechnologie	ZM	660	<b>660</b>	Chemical engineering
40	Wirtschaftswissenschaften	Q	310	<b>310</b>	Statistics
		Q	330	<b>330</b>	Economics
		Q	368		Insurance
		Q	380		Commerce, communications, transportation
		Q	650		Management & public relations
41	Wissenschaftskunde, Forschung, Hochschul-, Museumswesen	AK-AL	001		Knowledge
		AK-AL	060		General organizations and museology
		AK-AL	069		Museology (Museum science)
		AK-AL	378		Higher education

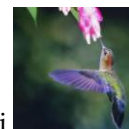
### C. EZB-DDC Concordance table for DDC or EZB notation assignment



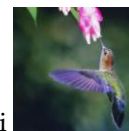
Nr.	EZB Fachgebiete	EZB Notation	DDC Notation intern
1	Allgemeine und vergleichende Sprach- und Literaturwissenschaft . Indogermanistik. Außereuropäische Sprachen und Literaturen	E	051
		E	052
		E	053
		E	054
		E	055
		E	056
		E	057
		E	058
		E	059
		E	081
		E	082
		E	083
		E	084
		E	085
		E	086
		E	087
		E	088
		E	089
		E	400
		E	410
E	490		
E	800		
E	879		
E	890		
2	Allgemeines, Fachübergreifendes	AZ	060
		AZ	061
		AZ	062
		AZ	063
		AZ	064
		AZ	065
		AZ	066
		AZ	067
		AZ	068
		AZ	010
		AZ	030
		AZ	050
		AZ	080
		AZ	790



		AZ	791
		AZ	792
		AZ	793
3	Anglistik. Amerikanistik	H	420
		H	810
		H	820
4	Archäologie	LD-LG	930.1
5	Architektur, Bauingenieur- und Vermessungswesen	ZH-ZI	380
		ZH-ZI	526
		ZH-ZI	620.1
		ZH-ZI	624
		ZH-ZI	625
		ZH-ZI	627
		ZH-ZI	628
		ZH-ZI	690
		ZH-ZI	710
		ZH-ZI	720
		ZH-ZI	747
6	Bildungsgeschichte	DD	370.8
		DD	370.9
7	Biologie	W	570
		W	580
		W	590
8	Chemie und Pharmazie	V	540
		V	551.9
		V	615.1
		V	615.2
		V	615.3
		V	615.4
		V	615.9
		V	660
9	Elektrotechnik, Mess- und Regelungstechnik	ZN	621.3
		ZN	629.8
		ZN	681
10	Energie, Umweltschutz, Kerntechnik	ZP	621.042
		ZP	621.1
		ZP	621.2
		ZP	621.402
		ZP	621.44



		ZP	621.45
		ZP	621.47
		ZP	621.48
		ZP	628
11	Ethnologie (Volks- und Völkerkunde)	LA-LC	301
		LA-LC	305.8
		LA-LC	325
		LA-LC	326
		LA-LC	369.3
		LA-LC	390
		LA-LC	642
12	Geografie und Reisen	R	910
		R	526
13	Geowissenschaften	TE-TZ	526
		TE-TZ	548
		TE-TZ	549
		TE-TZ	550
		TE-TZ	560
		TE-TZ	622
		TE-TZ	665
14	Germanistik	G	430
	Niederländische Philologie.	G	830
	Skandinavistik		
15	Geschichte	N	326
		N	900
		N	920
		N	930
		N	940
		N	950
		N	960
		N	970
		N	980
		N	990
16	Informatik	SQ-SU	000
		SQ-SU	003
		SQ-SU	004
		SQ-SU	005
		SQ-SU	006
		SQ-SU	621.39

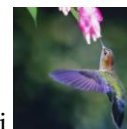


17	Informations-, Buch- und Bibliothekswesen, Schrift- und Handschriftenkunde	AN	002
		AN	020
		AN	090
		AN	411
18	Klassische Philologie. Byzantinistik. Mittellateinische und neugriechische Philologie. Neulatein	F	470
		F	480
		F	870
		F	880
19	Kunstgeschichte	LH-LO	700
		LH-LO	730
		LH-LO	740
		LH-LO	750
		LH-LO	760
		LH-LO	770
20	Land- und Forstwirtschaft. Gartenbau. Fischereiwirtschaft, Hauswirtschaft, Ernährung	ZA-ZE	630
		ZA-ZE	640
21	Maschinenwesen, Werkstoffwissenschaften, Fertigungstechnik, Bergbau, u. Hüttenwesen, Verkehrstechnik, Feinwerktechnik,	ZL	620
		ZL	621.1
		ZL	621.402
		ZL	621.406
		ZL	621.42
		ZL	621.43
		ZL	621.46
		ZL	621.5
		ZL	621.8
		ZL	621.9
		ZL	622
		ZL	623
		ZL	629
		ZL	666
22	Mathematik	SA-SP	510
23	Medien- und Kommunikationswissenschaften, Publizistik	AP	070
		AP	302.2
		AP	384
		AP	790
		AP	791
		AP	792



24	Medizin	WW-YZ	610
25	Musikwissenschaft	LP-LZ	780
26	Naturwissenschaft allgemein	TA-TD	500
27	Pädagogik	D	370
		D	649.1
28	Philosophie	CA-CI	100
		CA-CI	110
		CA-CI	120
		CA-CI	140
		CA-CI	160
		CA-CI	170
		CA-CI	180
		CA-CI	190
29	Physik	U	520
		U	530
		U	548
		U	551
		U	620.2
		U	620.3
		U	620.4
		U	620.5
		U	621
30	Politologie	MA-MM	320
		MA-MM	335
		MA-MM	350
31	Psychologie	CL-CZ	130
		CL-CZ	150
32	Rechtswissenschaft	P	340
		P	614.1
33	Romanistik	I	440
		I	450
		I	460
		I	840
		I	850





		I	860
34	Slavistik	K	491.8
		K	891.8
35	Soziologie	MN-MS	300
		MN-MS	310
		MN-MS	325
		MN-MS	326
		MN-MS	327
		MN-MS	334
		MN-MS	360
		MN-MS	390
		MN-MS	649
36	Sport	ZX-ZY	613.66
		ZX-ZY	613.7
		ZX-ZY	649.57
		ZX-ZY	794
		ZX-ZY	796
		ZX-ZY	797
		ZX-ZY	798
		ZX-ZY	799
37	Technik allgemein	ZG	600
38	Theologie und Religionswissenschaft	B	200
39	Verfahrenstechnik, Biotechnologie, Lebensmitte- technologie	ZM	660
40	Wirtschafts- wissenschaften	Q	310
		Q	330
		Q	368
		Q	380
		Q	650
41	Wissenschaftskunde, Forschung, Hochschul- ,Museumswesen	AK-AL	001
		AK-AL	060
		AK-AL	069
		AK-AL	378

## D. EZB-DDC Concordance Statistic

|1| {200} B



- | 1 | {510} SA-SP
- | 1 | {600} ZG
- | 1 | {660} ZM
- | 1 | {780} LP-LZ
- | 1 | {930.1} LD-LG
- | 2 | {130, 150} CA-CI
- | 2 | {340,614.1} P
- | 2 | {370,649.1} D
- | 2 | {370.8,370.9} DD
- | 2 | {430,830} G
- | 2 | {491.8,891.8} K
- | 2 | {526,910} R
- | 2 | {630,640} ZA-ZE
- | 3 | {320,335,350} MA-MM
- | 3 | {420,810,820} H
- | 3 | {570,580,590} W
- | 3 | {621.3,629.8,681} ZN
- | 4 | {001, 060, 069,378} AK-AL
- | 4 | {002,020,090,411} AN
- | 4 | {470,480,870,880} F
- | 5 | {310,330,368,380,650} Q
- | 6 | {000,003,004,005,006,621.39} SQ-SU
- | 6 | {070,302.2,384,790,791,792} AP
- | 6 | {440,450,460,840,850,860} I
- | 6 | {700,730,740,750,760,770} LH-LO
- | 7 | {301,305.8,325,326,369.3,390,642} LA-LC
- | 7 | {526,548,549,550,560,622,665} TE-TZ
- | 8 | {100,110,120,140,160,170,180,190} CA-CI
- | 8 | {540,551.9,615.1,615.2,615.3,615.4,615.9,660} V
- | 8 | {613.66,613.7,649.57,794,796,797,799,799} ZX-ZY
- | 9 | {300,310,325,326,327,334,360,390,649} MN-MS
- | 9 | {520,530,548,551,620.2,620.3,620.4,620.5,621} U
- | 9 | {621.042,621.1,621.2,621.402,621.44,621.45,621.47,621.48,628} ZP
- | 10 | {326,900,920,930,940,950,960,970,980,990} N
- | 10 | {500} TA-TD
- | 11 | {380,526,620.1,624,625,627,628,690,710,720,747} ZH-ZI
- | 11 | {610} WW-YZ
- | 16 | {061,062,063,064,065,066,067,068,010,030,050,080,790,791,792,793} AZ
- | 16 | {620,621.1,621.402,621.406,621.42,621.43,621.46,621.5,621.8,621.9,622,623,629,666,669,670,680} ZL
- | 24 | {051,052,053,054,055,056,057,058,059,081,082,083,084,085,086,087,088,089,400,410,490,800,879,890} E



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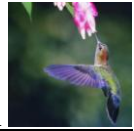
## E. EZB - DDC Concordance table for implementation purpose

### a) DDC - oriented

SQ-SU 000  
AK-AL 001  
AN 002  
SQ-SU 003  
SQ-SU 004  
SQ-SU 005  
SQ-SU 006  
AZ 010  
AN 020  
AZ 030  
AZ 050  
E 051  
E 052  
E 053  
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E 055  
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AZ 063  
AZ 064  
AZ 065  
AZ 066  
AZ 067  
AZ 068  
AK-AL 069  
AP 070  
AZ 080  
E 081  
  
E 082  
E 083  
E 084  
E 085  
E 086  
E 087  
E 088  
E 089  
AN 090  
CA-CI 100  
CA-CI 110  
CA-CI 120  
CL-CZ 130  
CA-CI 140  
CL-CZ 150  
CA-CI 160  
CA-CI 170  
CA-CI 180



CA-CI 190  
B 200  
MN-MS 300  
LA-LC 301  
AP 302.2  
LA-LC 305.8  
MN-MS 310  
Q 310  
MA-MM 320  
LA-LC 325  
MN-MS 325  
LA-LC 326  
MN-MS 326  
N 326  
MN-MS 327  
Q 330  
MN-MS 334  
MA-MM 335  
P 340  
MA-MM 350  
MN-MS 360  
Q 368  
LA-LC 369.3  
D 370  
DD 370.8  
DD 370.9  
AK-AL 378  
Q 380  
ZH-ZI 380  
AP 384  
LA-LC 390  
MN-MS 390  
E 400  
E 410  
AN 411  
H 420  
G 430  
I 440  
I 450  
I 460  
F 470  
F 480  
E 490  
K 491.8  
TA-TD 500  
SA-SP 510  
U 520  
R 526  
TE-TZ 526  
ZH-ZI 526  
U 530  
V 540  
TE-TZ 548  
U 548  
TE-TZ 549  
TE-TZ 550  
U 551



V 551.9  
TE-TZ 560  
W 570  
W 580  
W 590  
ZG 600  
WW-YZ 610  
ZX-ZY 613.66  
ZX-ZY 613.7  
P 614.1  
V 615.1  
V 615.2  
V 615.3  
V 615.4  
V 615.9  
ZL 620  
ZH-ZI 620.1  
U 620.2  
U 620.3  
U 620.4  
U 620.5  
U 621  
ZP 621.042  
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ZP 621.1  
ZP 621.2  
ZN 621.3  
SQ-SU 621.39  
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ZP 621.402  
ZL 621.406  
ZL 621.42  
ZL 621.43  
ZP 621.44  
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ZP 621.48  
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ZL 621.8  
ZL 621.9  
TE-TZ 622  
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ZH-ZI 624  
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ZH-ZI 628  
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ZN 629.8  
ZA-ZE 630  
ZA-ZE 640  
LA-LC 642  
MN-MS 649  
D 649.1  
ZX-ZY 649.57



Q 650  
ZM 660  
V 660  
TE-TZ 665  
ZL 666  
ZL 669  
ZL 670  
ZL 680  
ZN 681  
ZH-ZI 690  
LH-LO 700  
ZH-ZI 710  
ZH-ZI 720  
LH-LO 730  
LH-LO 740  
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LH-LO 760  
LH-LO 770  
LP-LZ 780  
AP 790  
AZ 790  
AP 791  
AZ 791  
AP 792  
AZ 792  
AZ 793  
ZX-ZY 794  
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ZX-ZY 797  
ZX-ZY 798  
ZX-ZY 799  
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H 810  
H 820  
G 830  
I 840  
I 850  
I 860  
F 870  
E 879  
F 880  
E 890  
K 891.8  
N 900  
R 910  
N 920  
N 930  
LD-LG 930.1  
N 940  
N 950  
N 960  
N 970  
N 980  
N 990

**b) EZB - oriented**



AK-AL 001  
AK-AL 060  
AK-AL 069  
AK-AL 378  
AN 002  
AN 020  
AN 090  
AN 411  
AP 070  
AP 302.2  
AP 384  
AP 790  
AP 791  
AP 792  
AZ 010  
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AZ 791  
AZ 792  
AZ 793  
B 200  
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CA-CI 110  
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CA-CI 190  
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CL-CZ 150  
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G 830  
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H 810  
H 820  
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K 891.8  
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LA-LC 305.8  
LA-LC 325  
LA-LC 326  
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LA-LC 390  
LA-LC 642  
LD-LG 930.1  
LH-LO 700  
LH-LO 730  
LH-LO 740  
LH-LO 750  
LH-LO 760  
LH-LO 770  
LP-LZ 780  
MA-MM 320  
MA-MM 335  
MA-MM 350  
MN-MS 300  
MN-MS 310  
MN-MS 325  
MN-MS 326  
MN-MS 327  
MN-MS 334  
MN-MS 360





MN-MS 390  
MN-MS 649  
N 326  
N 900  
N 920  
N 930  
N 940  
N 950  
N 960  
N 970  
N 980  
N 990  
P 340  
P 614.1  
Q 310  
Q 330  
Q 368  
Q 380  
Q 650  
R 526  
R 910  
SA-SP 510  
SQ-SU 000  
SQ-SU 003  
SQ-SU 004  
SQ-SU 005  
SQ-SU 006  
SQ-SU 621.39  
TA-TD 500  
TE-TZ 526  
TE-TZ 548  
TE-TZ 549  
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TE-TZ 622  
TE-TZ 665  
U 520  
U 530  
U 548  
U 551  
U 620.2  
U 620.3  
U 620.4  
U 620.5  
U 621  
V 540  
V 551.9  
V 615.1  
V 615.2  
V 615.3  
V 615.4  
V 615.9  
V 660  
W 570  
W 580  
W 590



WW-YZ 610  
ZA-ZE 630  
ZA-ZE 640  
ZG 600  
ZH-ZI 380  
ZH-ZI 526  
ZH-ZI 620.1  
ZH-ZI 624  
ZH-ZI 625  
ZH-ZI 627  
ZH-ZI 628  
ZH-ZI 690  
ZH-ZI 710  
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ZH-ZI 747  
ZL 620  
ZL 621.1  
ZL 621.402  
ZL 621.406  
ZL 621.42  
ZL 621.43  
ZL 621.46  
ZL 621.5  
ZL 621.8  
ZL 621.9  
ZL 622  
ZL 623  
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ZL 666  
ZL 669  
ZL 670  
ZL 680  
ZM 660  
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ZN 629.8  
ZN 681  
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ZP 621.1  
ZP 621.2  
ZP 621.402  
ZP 621.44  
ZP 621.45  
ZP 621.47  
ZP 621.48  
ZP 628  
  
ZX-ZY 613.66  
ZX-ZY 613.7  
ZX-ZY 649.57  
ZX-ZY 794  
ZX-ZY 796  
ZX-ZY 797  
ZX-ZY 798  
ZX-ZY 799