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SHAPING INFORMATION LITERACY FOR ENHANCING THE USE OF SCIENTIFIC JOURNALS COMPARATIVE STUDY ON ACADEMIC USERS' BEHAVIOUR

(Former à la maîtrise de l'information pour intensifier la consultation des revues scientifiques. Etude comparative des usagers en milieu universitaire)

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I dedicate this work to all those who have helped me become who I am today

Résumé étendu en français

La décision de rechercher sur le problème mentionné dans le titre de cette thèse a pris racine dans la filière de travail de son auteur. Les observations faites durant plusieurs années de services en tant que bibliothécaire à la tête du département d'acquisition dans le Département des Périodiques de la Bibliothèque Universitaire de Varsovie (BUV) ont démontré un faible niveau d'usage des revues scientifiques. Il n'y a pas de corrélation entre le budget admis sur les revues électroniques ou revues imprimées à l'étranger et la statistique des consultations de revues. Idem pour les revues imprimées en Pologne. En revanche, ce dernier ne présente pas de problème par rapport au budget dépensé sur l'achat des revues (parce que BUV reçoit des un dépôt légal de toutes les publications polonaises) mais plutôt des problèmes en relation avec la main d'œuvre et les coûts d'enregistrements, catalogages, reliages, rangement et ainsi de suite. Ce problème a été observé depuis l'année 2004 à BUV. En 2009, l'auteur devint membre de deux sections de l'IFLA (Fédération internationale d'associations de bibliothécaires et d'institutions) : Publications en série et ressources en continu, mais aussi de maîtrise de l'information. Ce fut une belle opportunité de commencer à observer les tendances actuelles et de participer dans les travaux de forums internationaux. Cette perspective plus étendue et globale a émis l'idée de rechercher et d'implémenter les concepts internationaux sur les terrains polonais.

En se familiarisant avec le domaine de maîtrise de l'information, le lien direct entre la formation dece dernier et l'usage des ressources offertes par les bibliothèques a été observé. Grace à une éducation en maîtrise de l'information complexe et convenablement implémentée, les étudiants deviennent des utilisateurs d'informations conscients et correctement orientés. La bibliothèque offre une collection étendue et riche en documents dans différents formats et langues. Par contre, cet offre ne correspond pas à l'usage. Pendant plusieurs stages professionnels effectués dans des universités à l'étranger (en Allemagne, France, Norvège et Grande Bretagne),

l'auteur a observé que les formations des usagers visaient initialement la recherche d'information. C'est ainsi que l'hypothèse d'une faible consultation des revues scientifiques liée à une formation à la maîtrise de l'information insuffisante a été établie. Cela a été le point de départ de l'idée de réaliser une recherche doctorale focalisée sur ce sujet.

L'étude présentée dans cette thèse s'inscrit dans la problématique générale de la maîtrise de l'information et dans le prolongement de travaux antérieurs conduits à ce sujet en France et en Pologne. L'objectif est d'évaluer l'expérience, les connaissances et les compétences des doctorants français et polonais quant à leur usage des revues scientifiques offertes par les bibliothèques universitaires, et ce, afin de mettre en place un programme éducatif, dédié aux doctorants, basé sur les standards de la maîtrise de l'information et visant à développer leur usage des revues scientifiques.

Le but de cette thèse est de trouver les réponses aux questions de recherche développées et d'enquêter sur les problèmes de recherche identifiés comme suit :

1. Pourquoi les étudiants consultentrarement les revues scientifiques ?
2. Est-ce lié aux offres de la bibliothèque ?
3. Qu'est-ce qui devrait être fait afin d'augmenter la consultation des revues scientifiques ?

Pour vérifier l'hypothèse et répondre aux questions de recherche, les doctorants ont été ciblés. Les doctorants peuvent être perçus comme des utilisateurs d'informations avancés. Ils ne sont pas seulement des étudiants, mais aussi des chercheurs et, dans beaucoup de cas, des professeurs également. Par conséquent, il peut en être déduit que leurs utilisation d'informationne s'arrête pas qu'à la recherche pour leurs thèses. En outre, le Processus de Bologne a légalisé le doctorat en tant que troisième cycle d'éducation supérieureet a imposé de multiples requis sur les études doctorales inexistant auparavant.

Tous ces facteurs décris précédemment ont influencés le choix de rechercher sur ce groupe d'usagers des bibliothèques.

Les doctorants de l'Université de Varsovie étaient une cible naturelle et évidente – l'auteur étudiait au préalable à cette université et y a ensuite travaillé. L'Université de Lille a été choisie après inscription dans l'établissement et l'attribution d'une bourse du Gouvernement français qui apermis à l'auteur de passer au total quinze mois à Lille pour mener la recherche.

Dans le premier chapitre, en nous basant sur la littérature, nous présentons les concepts et modèles antérieurs de la maîtrise de l'information, les interprétations des problématiques de recherche et la terminologie relative au domaine utilisée dans la littérature polonaise et française. Un état de l'art général de la recherche menée dans les deux pays sur la maîtrise de l'information est également réalisé.

Ce chapitre parcourt et élabore la littérature lié à la maîtrise de l'information. L'étendue de cette littérature est plutôt sélective que compréhensive car elle pose le contexte du problème à être exploré. Les fondations théoriques du concept de maîtrise de l'information sont aussi discutées. Les plus grandes initiatives liées à la maîtrise de l'information sont également présentées car elles ont trouvé leur place dans la littérature et sont souvent citées par divers auteurs. Parce que la maîtrise de l'information est un des sujets les plus recherchés dans la bibliothéconomie et sciences de l'information, il est impossible de parcourir toute la littérature existante. Plusieurs études soutiennent que durant les années 1973 à 2000, plus de cinq milles articles ont été publiés concernant la maîtrise de l'information. En considérant que le vrai boom de maîtrise de l'information a commencé après l'an 2000, il peut être soutenu qu'actuellement plusieurs milliers de publications sont disponibles sur ce sujet. Inspiré par l'approche des études de délimitation et reflétant le temps et l'adéquation, la revue de la littérature présenté dans ce chapitre se concentre primordialement sur la maîtrise de l'information dans le milieu académique et inclus les articles et études

publiés après l'an 2000. Les exceptions sont les descriptions des points forts historiques de la maîtrise de l'information où la littérature datant des années 90 a été repassée.

Le premierchapitre est divisé en six sections. La première section enquête sur les conceptions compréhensives de la maîtrise de l'information, les définitions du concept, divers interprétations et différents modèles, les cadres de travail, et les standards de la maîtrise de l'information. La deuxième section présente tous les aspects de l'implication des bibliothèques et bibliothécaires dans la maîtrise de l'information : formation des usagers des bibliothèques, collaboration entre la bibliothèque et l'université et y compris le besoin de l'évaluation permanente des programmes de maîtrise de l'information. La troisième section accentue sur les problèmes de traduction français et polonais. La quatrième section appuie sur l'état de l'art de la maîtrise de l'information en Pologne et en France. La cinquième section examine les organisations et institutions nationales et internationales sélectionnées engagées dans la maîtrise de l'information. En fin, la sixième section met l'emphase sur la différence entre les termes « maîtrise de l'information » et « culture informationnelle ».

Le deuxième chapitre est consacré à la conception et analyse de l'étude comparative conduite parmi les doctorants à l'Université de Varsovie et l'Université de Lille 3. La méthodologie de recherche, sa conception et l'analyse détaillée y sont présentées. Dans la première partie du chapitre, les résultats de l'étude à l'Université de Varsovie sont traités ; la deuxième partie se focalise sur les données obtenues à partir de l'étude faite à l'Université de Lille et la troisième partie présente l'analyse comparative des deux études.

La recherche comparative, présentée dans ce chapitre, menée entre les doctorants français et les doctorants polonais vise, d'une part, à vérifier l'hypothèse d'un faible usage des revues scientifiques par les doctorants et, d'autre part, à répondre à la question de savoir quelles activités les

bibliothécaires et les enseignants pourraient offrir aux étudiants afin de les inciter à consulter plus fréquemment les revues scientifiques.
Trois méthodes sont appliquées dans cette recherche : l'enquête, les observations et la
théorie ancrée.

L'enquête semble l'approche la plus adéquate pour obtenir un large échantillon. Elle s'appuie sur un questionnaire, outil classique des recherches en sciences sociales, composé de vingt-septquestions. Première partie du sondage : vingt-et-une questions détaillées sur l'utilisation des bibliothèques et des informations disponibles à l'Université de Varsovie et l'Université de Lille ont pour but d'enquêter si les doctorants sont familiers aux répertoires électroniques et traditionnels de la bibliothèque, aux catalogues collectifs nationaux (*NUKAT* - Catalogue Collectif National *Polonais ou SUDOC* - Système Universitaire de Documentation) et aux collections de revues imprimées et électroniques. Les questions concernaient la formation des bibliothèques, aussi bien que les obstacles potentiels en utilisant les revues scientifiques procurées par les bibliothèques.

Deuxième partie du recensement : six questions démographiques conçues pour acquérir les caractéristiques basiques des participants, incluant le sexe, les années d'études, la filière de recherche et la maîtrise de l'anglais ou autres langues.

Le questionnaire a été préparé sur la plateforme *eSurveysPro.com* fourni par une entreprise de logiciel Roumaine *Outside Software Inc.* disponible gratuitement sur internet. Le questionnaire a été posté sur le serveur de *eSurveysPro.com* et le lien correspondant était distribué parmi les étudiants.

L'observation, également classique en sciences sociale, est une méthode d'observation directe, à sens unique. Dans le cadre de cette recherche des observations participantes couvertes sont réalisées.

Cela veut dire que l'observateur ne déclare pas sa présence et ses intentions pour ne pas influencer sur le comportement de la population observée. Ceci est lié au fait que certaines situations peuvent être observées en cachette seulement au but de rendre la recherche plus crédible.

La théorie ancrée est une méthode quantitative de recherche dont la démarche principale consiste à construire le cadre théorique au moment où se déroule la recherche empirique et non au moment de la revue de la littérature et de la définition des hypothèses.

Dans la théorie ancrée, les conclusions liées au comportement humain sont élaborées systématiquement sur la base de données empiriques collectées au préalable. La démarche principale de la théorie ancrée consiste à construire le cadre théorique au moment où se déroule la recherche empirique, et non durant l'étape de revue de la littérature et de définition des hypothèses. En effet, dans cette approche, le chercheur doit commencer son travail avec l'esprit ouvert : c'est pourquoi la revue de la littérature, pour éviter la formulation d'hypothèses préliminaires, ne se fait qu'après le recueil et l'analyse des données. Cette quintessence de la théorie ancrée a fait l'objet de nombreuses critiques et d'intenses discussions.

Premièrement donc, au lieu de l'hypothèse, le chercheur pose des questions et il développe ensuite la théorie en se basant sur les données analysées tout au long de la recherche. Le chercheur doit être préparé à découvrir des événements non prévus et non assumés auparavant. Le manque d'hypothèses initiales est lié au manque de nécessité de les vérifier par la suite. Les questions de recherche peuvent être considérées comme des hypothèses de travail.

Deuxièmement, pour éviter l'orientation subconsciente d'une recherche menée sur la base de modèles et les résultats et d'examens réalisés auparavant, la revue de la littérature a lieu après le recueil de données et l'analyse.

Les étapes suivantes du travail sont : la phase de codage des données, la phase de création des mémos, suivie d'un tirage de ces derniers et enfin la

production de la théorie. La dernière phase conduit directement à annoncer les résultats de la recherché.

Dans cette thèse, le but est de vérifier si cette méthode est appropriée aux recherches comparatives sur les besoins informationnels des usagers des bibliothèques universitaires françaises et polonaises.

La totalité des 3789 doctorants actuellement inscrits au sein des different départements de l'Université de Varsovie (1771 doctorants) et des cinq écoles doctorales des trois universités de Lille - Lille 1, Lille 2 et Lille 3 (2018 doctorants) ont été invités à participer à l'enquête. L'étude comparative a été menée sur un échantillon de 578 doctorants (317 français et 261 polonais) qui ont répondu en ligne au questionnaire. Les conclusions principales de cette recherche mettent en evidence un usage limité des revues scientifiques par ce groupe d'usagers des bibliothèques universitaires dû aux raisons suivantes: absence de formation à la maîtrise de l'information spécialisée dédiée aux doctorants (dans le cas de la Pologne) et absence de promotion, ou plutôt de vulgarisation, d'une offre de formations de ce type auprès des doctorants et des enseignants qui pourraient encourager leurs étudiants à y participer (dans le cas de la France). Les recommandations formulées à l'égard de l'Université de Varsovie proposent un développement de la formation à la maîtrise de l'information et celles formulées à l'égard de l'Université de Lille encouragent une promotion plus effective de l'offre de formation déjà existante.

Cette étude résulte en un bon nombre de contributions.

1. Ceci est la première étude faite en ce genre. L'examen de la littérature de bibliothéconomie et sciences de l'information révèle qu'aucune étude comparative entre la France et la Pologne n'a été réalisé jusqu'à ce jour, pas seulement dans le domaine de la maîtrise de l'information et des doctorants, mais aussi généralement en bibliothéconomie et sciences de l'information.
2. Ceci est aussi la première étude comparative réalisée pendant l'implémentation du Processus de Bologne. Un rappel : Le Processus de

Bologne a pour but généralement d'unir l'Espace Européen de l'Enseignement Supérieur, transmettre la connaissance, et d'adopter la qualification du cadre de travail de l'Espace Européen de l'Enseignement Supérieur.

3. En France, l'étude des usagers des bibliothèques universitaires est assez développée mais en Pologne ce domaine n'est pas suffisamment reconnu et les soi-disant études ne vont pas plus loin que les simples statistiques liées aux visites des bibliothèques et aux nombres d'emprunts. Cette étude vise une contribution majeure dans ce domaine pour ces deux pays.
4. Une contribution à la recherche dans le domaine de la maîtrise de l'information en France et Pologne est présentée dans cette thèse par non seulement l'étude en elle-même, mais aussi la revue de la littérature. L'image compréhensive des concepts et approches de la maîtrise de l'information appliquée aux deux pays peut être utile pour les futures études comparatives.
5. Le souhait de cette étude est que ses constatations et conclusions puissent trouver une application. Naturellement, il pourrait être plus facilement concrétisé en Pologne car la filière de recherche (c.à.d l'Université de Varsovie) est le milieu de travail de l'auteur de cette thèse.
6. L'étude identifie également les thèmes qui peuvent être considérés et implémentés par les bibliothèques ; le principal étant le renforcement du rôle et de l'importance de la maîtrise de l'information. L'offre existante des formations de maîtrise de l'information devrait être améliorée et retouchée pour subvenir aux besoins des thésards. D'après le guide de Processus de Bologne dans le Cadre de Qualifications Européen pour les Etudes Européennes Supérieures, aussi connu sous le nom de Descripteurs de Dublin, les bibliothèques devraient, à long terme, lutter pour l'implémentation de la maîtrise de l'information dans les plans stratégiques des universités ; ce qui entraînera l'intégration de la maîtrise de l'information dans le cursus.

7. Grace à la méthode de comparaison appliquée à cette étude, certaines similitudes et disparités sur la compréhension, l'application et la réalisation en pratique de la maîtrise de l'information dans les deux pays ont été identifiées.

Même si cette étude a été faite avec un égard sincère vis-à-vis de la méthodologie précise considérée et choisie en référence avec le sujet de littérature de la maîtrise de l'information et des autres travaux de bibliothéconomie et sciences e l'information, il y a quelques bornes qui pourraient être perçues comme des faiblesses et ont influencé les résultats, constatations, et contributions de cette étude. Ils sont repris comme suit :

1. L'échantillon de réponse peut être perçu comme trop petit pour être représentatif des deux universités ; à rappeler, 14.73% pour l'Université de Varsovie et 15.70% pour l'Université de Lille. Cependant, il est difficile de forcer les personnes ciblées de participer à l'étude et d'influencer sur leur non-adhérence à prendre part au sondage, bien que leurs participations aient été recommandées par les autorités d'études doctorales et l'administration. Dans le cas de cette étude, le but était d'examiner le plus grand nombre de participants. Pour ce qui est du nombre de répondeurs, si le pourcentage est pris en compte, des doutes pourraient être soulevés. Mais si le nombre réel de répondeurs est considéré (261 pour l'Université de Varsovie et 317 pour l'Université de Lille), il est vu que 578 étudiants ont démontré une adhésion à contribuer à l'étude et y ont dédié leur temps.
2. Le domaine d'étude divisé peut être disputé. Dans cette étude, les participants ont été amenés à indiquer leur filière parmi : sciences appliquées, sciences humaines, sciences pures et sciences sociales. Ceci pourrait soulever des questions, notamment dans la lumière d'autres études. Généralement, les différences disciplinaires sont complexes et essentielles ; particulièrement due aux différences dans la structuration

de connaissance et techniques de recherche entre les sciences. Elles influent sur la méthode d'enseignement et d'apprentissage.

3. Dans le contexte de cette étude, étant la première en son genre, il semblait plus approprié de commencer par le vaste niveau disciplinaire. Les potentiels travaux futurs pourront étriquer et partitionner plus spécifiquement les domaines.
4. La question évoquant la possibilité d'une comparaison entre les universités de Lille et Varsovie peut être posée. Il y a en effet beaucoup de différences (géographiques, économiques, développementales, ou éducationnelles) mais les deux universités sont situées dans l'Union Européenne et tous deux implémentent le Processus de Bologne et sont membres de l'Espace Européen de la Recherche. De plus, le répertoire d'information disponible dans les universités des deux pays est similaire parce que de nos jours, les publications et communications scientifiques sont internationales. De ce fait, les deux pays peuvent faire l'objet d'une étude comparative.

Suite aux résultats de cette étude, les implications suivantes peuvent être suggérées pour les bibliothécaires, les administrateurs de bibliothèques universitaires, les unités de formations et l'administration universitaire :

1. Cette étude pourrait aider les bibliothécaires à mieux comprendre les besoins des utilisateurs et définir les carences d'offre dans les bibliothèques. Au forum universitaire, ceci a aussi souligné l'importance de la formation en maîtrise de l'information.
2. Les résultats de l'étude présente une série d'implications qui pourrait être considérée par les décideurs politiques, tant bien que les bibliothèques et administrateurs universitaires aussi.
3. Il y a un grand besoin de professionnalisation du rôle pédagogique des bibliothécaires. La formation de formateurs devrait être organisé pour permettre aux bibliothécaires d'acquérir des compétences et outils pédagogiques nécessaires. Les bibliothécaires confiant pourront préparer une offre de formation de maîtrise de l'information plus

attrayante et la promouvoir au forum universitaire. Les bibliothécaires devraient être assimilés à des éducateurs à l'université.

4. L'offre de formation en maîtrise de l'information devrait être développée et ajustée aux besoins particuliers des doctorants. Les stages pour chaque discipline devraient être élaborés.
5. Il y a un besoin de renforcer la promotion des services des bibliothèques et d'offre de formation. Toutefois, il ne peut être accompli sans la réalisation des activités décrites dans les points (1) et (2).
6. Les résultats de cette étude peuvent aussi engendrer une réflexion critique vis-à-vis des politiques d'acquisitions de bibliothèques liée aux revues et outils scientifiques (imprimés et électroniques) comme les systèmes de la recherche fédérée, les systèmes de gestion de données bibliographiques, ou les plateformes de la formation à distance.
7. Depuis le début de cette recherche, il y a eu de multiples améliorations dans le domaine de maîtrise de l'information en Pologne. La maîtrise de l'information polonaise s'est amplement développée, essentiellement grâce au Comité de maîtrise de l'information établie en Janvier 2011 au sein de l'Association des bibliothécaires polonaises. Cependant, les initiatives entreprises par ce comité se sont focalisées plus sur les bibliothèques publiques et scolaires. Les initiatives dédiées aux bibliothèques académiques visent à aider les bibliothécaires à développer leurs connaissances et compétences de maîtrise de l'information et à élargir l'offre de formation de ce dernier pour les étudiants en licence et master. Ainsi, il peut être conclu que même si beaucoup a déjà été fait, il reste toujours du travail à faire pour les thésards et cette étude s'ambitionne d'être à la base des développements futurs dans ce domaine. Ceci peut être facilité par le fait que l'auteur soit la co-fondatrice du Comité de maîtrise de l'information et membre du comité permanent de la section de l'IFLA de la maîtrise de l'information.

Cette étude de recherche suggère un nombre de recommandations et identifie les implications clés et conclusions. En outre, il a précipité l'indication de différents domaines de recherches futures qui pourront être élaborés tout en gardant en tête les facteurs suivants :

1. La recherche appliquant la théorique ancrée. Une étude potentielle sur la maîtrise de l'information peut être conduite, en appliquant tout le processus de travail à avec la théorie ancrée.
2. Une étude de recherche approfondie et transdisciplinaire pourrait être faite afin d'enquêter sur les relations complexes entre le domaine d'étude et le besoin d'information prenant en considération toutes les différences décrites précédemment entre les filières d'étude.
3. Il y a une nécessité de travail sur les forums universitaires, visant à la légalisation de la maîtrise d'information et son implémentation aux stratégies universitaires et cursus dans les deux pays.
4. Pour y aboutir, la coopération entre bibliothèques et départements de l'université et l'entente commune sur la maîtrise d'information au niveau de l'administration universitaire est obligatoire.
5. Pour renforcer la recherche sur la maîtrise de l'information et ses usagers dans les deux pays, une équipe de recherche de bibliothèque pourrait être établie afin de garantir les études menées systématiquement en relation avec les méthodologies de sciences appliquées actuelles.
6. Cette étude démontre que les bibliothèques devraient développer leur formation de maîtrise de l'information et être plus concentré sur des branches d'études particulières au lieu de préparer une seule offre uniforme. Ceci résulte du fait qu'une formation uniforme de maîtrise de l'information pour les doctorants n'existe pas analogiquement à la pratique informationnelle qui se distingue d'une discipline à l'autre.
7. Comme cette étude a été réalisé sur les doctorants, il semblerait logique que les autres études semblables soient effectuées sur les étudiants en licence et master pour avoir une vue globale du rapport

entre les étudiants, les revues scientifiques et la maîtrise de l'information.

8. Une des propositions pour des travaux futurs était d'implémenter la maîtrise de l'information dans les stratégies et cursus universitaires. Après réalisation de ces recommandations, il serait approprié de voir encore une fois si et comment ce changement significatif dans la perception et le rôle de maîtrise de l'information influence ses usagers.

Dans les parties suivantes de cette thèse, nous présentons les problèmes et les approches possibles pour l'élaboration déformations à la maîtrise de l'information, en nous basant sur les résultats de la recherche comparative et après avoir discuté les différents aspects pédagogiques nécessaires au déploiement d'une formation à la maîtrise de l'information.

Au cours du troisième chapitre, le rôle éducatif des bibliothécaires est discuté, nécessaire pour la rédaction du programme de formation de maîtrise de l'information pour les doctorants. Les attitudes et attentes des étudiants sont décrites, ainsi que les facteurs pédagogiques qui devraient être considérés en planifiant un programme éducatif dans le domaine de maîtrise de l'information. Quelques modèles didactiques et théories d'apprentissage qui pourraient être utiles à la formation de maîtrise de l'information sont aussi introduits. L'emphase est aussi mise sur la collaboration entre les bibliothèques et les départements de l'université, et sur l'intégration de maîtrise de l'information dans le cursus. Pour que la formation de ce dernier soit un franc succès, ce type de collaboration est très important. Parce que la maîtrise de l'information est considérée comme plus qu'une simple affaire de bibliothèque étant utile dans plusieurs domaines et enseignant comment être efficace en apprentissage continu, le partenariat entre les départmenets de l'université, et plus généralement avec les parties prenantes d'autres universités est indispensable. D'ailleurs, une telle collaboration est une approche naturelle à l'enseignement académique et l'isolement a une mauvaise influence sur la recherche. Les enseignants-chercheurs sont des experts dans leurs disciplines et les bibliothécaires - dans l'accès d'information. La quantité d'informations croît rapidement, mais aussi la

méthodologie à l'accès d'information change. Ceci offre une opportunité aux bibliothécaires d'implémenter des programmes de maîtrise de l'information officiels et bien intégrés dans le cursus afin de faire partie du personnel enseignant académique. Au fait, la solution plus idéale et désirable serait d'intégrer la maîtrise de l'information dans la mission, stratégie et les buts éducatifs de l'institution. Une telle approche donne à la maîtrise de l'information une valeur additionnelle et résulte en sa perception en tant que thématique académique et non seulement de bibliothèque.

La collaboration réussie est le premier pas vers la compréhension de l'importance de la maîtrise de l'information au niveau institutionnel et est une raison pour l'intégrer dans le cursus. Dans la majorité des cas, ce partenariat provoquera les changements dans la politique institutionnel, la réflexion sur les approches d'enseignement et d'apprentissage, et l'attitude des étudiants d'université et aussi entraînera des aménagements de ressources liés au budget, facilités et temps. Le partenariat entre les départmenets de l'université et la bibliothèque aidera aussi à l'adaptation des méthodes pédagogiques plus convenants, répondant aux besoins des étudiants.

L'intégration de la formation en maîtrise de l'information dans le cursus est un processus long et compliqué. Dans la littérature, il y a beaucoup d'exemples décrivant et sous-lignant les défis et difficultés rencontrés. Même la description précédente peut donner l'impression que l'implémentation de maîtrise de l'information dans le cursus requiert de changer de façon d'enseigner dans l'université entière. Au fait, il peut être partiellement considéré dans ce sens et ici le rôle d'introduction du Processus de Bologne semble être une bonne opportunité de changer et ajuster les styles d'enseignement pour s'adapter aux besoins des étudiants modernes. Si la maîtrise de l'information est perçue comme faisant partie du processus éducatif (et ceci étant l'utilité principale), il devrait être harmonisé avec le reste du cursus. De la sorte, introduisant la maîtrise de l'information change

aussi le travail des unités de de Formation et de Recherche et d'administrations.

Dans le quatrième chapitre un cadre pour l'élaboration d'un programme éducatif dédié à la maîtrise de l'information et destinés aux doctorants est présenté. Le programme s'adresse aux doctorants de première année qui sont au début de leurs recherches.

Ceci a été décidé en se basant sur les analyses de littérature existantes et des programmes didactiques en Europe, au Canada et aux Etats-Unis. Toutes les étapes à la préparation du programme sont discutées. Tous les pas de formations de maîtrise de l'information sont décrites : à partir de la planification, en préparant le contenu, l'appréciation et l'évaluation jusqu'à l'intégration de la formation dans le cursus.

Cette thèse vise à la discussion du problème d'intensification encourageant la consultation des revues scientifiques par la formation en maîtrise de l'information. Parce que le rapport direct entre la formation de maîtrise de l'information et la consultation des revues scientifiques a été observé, et l'hypothèse initiale d'une faible utilisation de ce dernier a été établie, l'objectif était de savoir si cette hypothèse peut être vérifiée et si ce problème est visible chez les doctorants français et polonais.

Le point de départ était l'enquête des problèmes généraux et de la toile de fond de maîtrise de l'information, y compris ses initiatives primordiales, documents clés, organisations imprégnées dans ce problème et les standards et guides. Ensuite, le progrès de l'analyse de maîtrise de l'information en France et en Pologne a été conduite (à voir Chapitre 1). Cette base a donné le cadre de travail et les justificatifs pour mener l'étude empirique (à voir Chapitre 2). Les résultats de celle-ci ont pavé le chemin vers les étapes futures à entreprendre durant cette thèse, c.à.d la description des problèmes théoriques pédagogiques nécessaire pour établir la formation en maîtrise de l'information (à voir Chapitre 3), discutant sur les programmes existantes de ce dernier pour les doctorants, et finalement traçant les études en maîtrise de

l'information de l'auteur visant à aider les thésards dans leur recherche (à voir Chapitre 4).

Cette thèse est alignée à plusieurs études conduites récemment pour afin de d'approfondir et développer le domaine de maîtrise de l'information et aussi les études de recherche des usagers.

L'analyse exhaustive de la littérature française et polonaise a démontré la quantité de travail restant à être faite dans les deux pays et le nombre de topiques encore jamais discuté par les auteurs français et polonais ; surtout les points liés à la pédagogie de maîtrise de l'information présentés dans le troisième chapitre de cette thèse.

Les problèmes de recherche soulevés dans l'introduction (rappel : Pourquoi les étudiants utilisent-ils rarement les revues scientifiques ? ; Est-ce par rapport aux offres des bibliothèques ? ; Qu'est-ce qui devrait être fait pour promouvoir l'utilisation des revues scientifiques ?) ont été examinés durant l'étude comparative avec un échantillon de recherche de 578 doctorants de Varsovie et Lille. Les résultats de cette recherche ont permis de confirmer que la méthodologie utilisée (rappel : questionnaire, théorie ancrée, observations) était correcte et appropriée dans ce cas d'étude. Malgré quelques barrières (décrites dans le Chapitre 2), l'étude a aidé à trouver solution aux problèmes soulevés. L'hypothèse initiale liée à l'utilisation des revues scientifiques n'était pas totalement vérifiée. Les doctorants lisaient avec agrément les revues scientifiques imprimées et électroniques. Ils sont conscients de l'importance de cette source d'information, mais cependant l'étude révèle qu'ils ne les utilisent pas assez et pas d'une manière consciencieuse. Cette découverte a donné la réponse à la question liée aux offres des bibliothèques. Le rapport entre la consultation des revues scientifiques et l'offre de la bibliothèque est cruciale. Les découvertes principales de l'étude comparative sont, rappelons-le, absence de formation à la maîtrise de l'information spécialisée dédiée aux doctorants (dans le cas de la Pologne) et absence de promotion, ou plutôt de vulgarisation, d'une offre de formations de ce type auprès des doctorants et des enseignants qui

pourraient encourager leurs étudiants à y participer (dans le cas de la France). Ces constatations ont permis une réflexion sur le dernier problème de recherche posé : qu'est-ce qui devrait être fait afin d'augmenter la consultation des revues scientifiques ?; cependant, les résultats ont ajouté une sous-problème et reformulé la question en : Qu'est-ce qui devrait être fait avec les offres de formation de maîtrise de l'information dans les bibliothèques afin d'augmenter la consultation des revues scientifiques ? Les démarches futures les plus potentielles à entreprendre ont été décrites dans la section dédiée à la direction des études futures (Chapitre 2). Parmi huit problèmes qui y sont suggérés, le plus crucial semble être : le besoin de travail sur les forums universitaires, visant à légaliser la maîtrise de l'information et son implémentation dans les stratégies universitaires et cursus dans les deux pays ; et la coopération entre les bibliothécaires et les enseignants-chercheurs, et la plaidoirie pour la maîtrise de l'information au niveau universitaire administratif.

Quelques restrictions de l'étude sont inévitables. Elles ont été décrites en détail dans le Chapitre 2. Ces restrictions ont permis de marquer le chemin pour les analyses potentielles futures. La plus importante est d'étriquer le groupe ciblé dans le futur et de se concentrer sur une recherche approfondie liée à une ou deux disciplines avec des parties de sous-domaines détaillées.

Le but ambitieux de l'auteur de cette thèse était de conclure la recherche avec un cadre de travail de programme de formation de maîtrise de l'information adressé aux doctorants. Ceci est une implantation pratique pour présenter ici la recherche théorique doctorale. Le souhait de l'auteur, une bibliothécaire active, était de donner aux professionnels informationnels un indice direct qu'ils peuvent ajuster et utiliser dans leurs travaux avec les usagers d'information, c.à.d. les doctorants.

Le programme éducatif suggéré pourrait aider à renforcer la consultation des revues scientifiques, familiariser les doctorants aux processus de recherche et publications, et plus généralement, pourrait renforcer la communication scientifique. L'entraînement formera les bonnes

habitudes et présentera les bonnes pratiques de gestion de recherche d'information. De cette façon, le programme éducatif répond aux besoins explorés et enquêtés durant cette thèse.

Acknowledgments

The work on this thesis gave me much more than just a chance of being a candidate for PhD degree. It was a great experience and a big international and multicultural adventure that, I am sure, has influenced a lot my life and will find its continuation.

This doctoral dissertation has only one author on the title page. However, its creation was a cooperative work of many people. Without trust, assistance, help, and support of kind-hearted people I would not be able to complete my thesis.

Here, I would like to thank those who helped me the most during these almost four years.

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I give special thanks to all friends who I met in Lille. Thanks to them my "PhD adventure" was not just studying, but also (or even first of all) a big fun. Being a member of Polish Dolphins Triolo Trio Team and Association d'Amitié Polo-Syrienne, taking part in all CROUS lunches, parties, and trips ("les plus dués vont à Douai!"), and having the honourable status of the "Princess of Triolo Tower" (who knows how to make a snowman and can show it to people from "warmer parts of the world") made my stay in Lille something much more than just a research duty. I am a sociable person, so there are too many friends to enumerate here by names. Let me just say "thank you" in their languages: (Pl.) dziękuję, (Fr.) merci, (Aze.) Çox sağ ol, (Wo.) diereudieuf, (Vi.) cảm ơn, (Ar.) شُكراً جَزيلا, (Per.) سد پا سد گزارم , (Ur.) شکریہ.

Last but not least I would like to thank my family who assisted me with my doctoral adventure. In fact, my PhD was a “family task”. I know sometimes it was hard, but we were really well organised and I guess we all agree it was worth doing. It is very unfortunate that Luxio passed away and he cannot share (in his - dog’s manner) these happy moments with me ...

This dissertation is edited in Apolonia typeface. Apolonia was designed in Poland in 2010.
The installation kit is available at http://www.polskalitera.pl

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Abstract in English

The purpose of the research described in this thesis was: to present the problem of information literacy (IL) from the perspective of the previous works in this domain, especially those conducted in France and in Poland; to evaluate the experience, knowledge, and skills of French and Polish doctoral students in the area of use of scientific journals offered by academic libraries; and to prepare and educational project for doctoral students, based on IL international standards and principally aimed at increasing the use of scientific journals.

In the first chapter, based on the body of literature, the concepts and models of IL worked up to date were presented as well as the interpretation of the research problems and terminology related to IL, applied in Polish and French literature; and also the current state of IL research in Poland and France.

The comparative study, described in the next chapter, conducted among French and Polish doctoral students tended on the one hand to verify the hypothesis of a low use of scientific journals by doctoral students, and on the other hand - to answer the question of what activities librarians and faculty should undertake to increase this use.

Three methods were used in the research: survey, observations, and grounded theory.

The survey was selected as the most appropriate approach to get a large sample. The survey method relied on a questionnaire instrument and is the most common method used in social science research. The questionnaire used contained 27 questions and was divided into 2 parts: Part 1 – twenty-one detailed questions about information holdings use of University of Warsaw and Universities of Lille libraries Part 2 - six demographic questions, designed to get the basic respondents characteristics, including: gender, year of studies, field of research, English and other languages proficiency.

Observation is a classic method in the social research. This is a one-way, directed method. In the case of this research a covert participant observations were applied.

Grounded theory - a quantitative research method that aims at developing theory from data systematically obtained from an empirical social research and not at the stage of literature review and definition of hypothesis. In this research the objective was to verify if this method might be appropriate in the comparative study of information needs of French and Polish libraries users.

All 3789 doctoral students currently enrolled in studies at different faculties at the University of Warsaw (in total 1771 PhD students) and in five doctoral schools of three universities in Lille: Lille 1, Lille 2, and Lille 3 (in total 2018 PhD students) were asked to take part in survey.

The comparative study was conducted on the sample consisted of 578 doctoral students (317 French and 261 Polish) who filled in the online survey. The major findings of the study, related to the reasons of the limited use of scientific journals by this group of users of academic libraries are: the lack of specialised library instruction dedicated to doctoral students (in the case of Poland); and the lack of promotion or popularisation of such instruction among doctoral students and lecturers who could encourage their students to participate (in the case of France). The recommendations in the case of University of Warsaw included developing the offer of the IL training for doctoral students; and in the case of University of Lille – more effective promotion of the existing library instruction offerings.

In the two next parts of the thesis the problems and approaches to designing programmes of information literacy education were presented and, basing on the results of the comparative study and discussing all pedagogical issues necessary for IL education, the framework of an IL educational programme for doctoral students was suggested. The programme is addressed to the 1st year PhD students, being at the beginning of their research.

Key words: information literacy, doctoral students, information literacy education, user studies, scientific journals, grounded theory, comparative study, information literacy – France, information literacy – Poland, academic libraries – France, academic libraries – Poland

Résumé en français

L'étude présentée dans cette thèse s'inscrit dans la problématique générale de la maîtrise de l'information et dans le prolongement de travaux antérieurs conduits à ce sujet en France et en Pologne. L'objectif est d'évaluer l'expérience, les connaissances et les compétences des doctorants français et polonais quant à leur usage des revues scientifiques offertes par les bibliothèques universitaires, et ce, afin de mettre en place un programme éducatif, dédié aux doctorants, basé sur les standards de la maîtrise de l'information et visant à développer leur usage des revues scientifiques.

Dans le premier chapitre, en nous basant sur la littérature, nous présentons les concepts et modèles antérieurs de la maîtrise de l'information, les interprétations des problématiques de recherche et la terminologie relative au domaine utilisée dans la littérature polonaise et française. Un état de l'art général de la recherche menée dans les deux pays sur la maîtrise de l'information est également réalisé.

La recherche comparative, présentée dans le chapitre suivant, menée entre les doctorants français et les doctorants polonais vise, d'une part, à vérifier l'hypothèse d'un faible usage des revues scientifiques par les doctorants et, d'autre part, à répondre à la question de savoir quelles activités les bibliothécaires et les enseignants pourraient offrir aux étudiants afin de les inciter à consulter plus fréquemment les revues scientifiques.

Trois méthodes sont appliquées dans cette recherche : l'enquête, les observations et la théorie ancrée.

L'enquête semble l'approche la plus adéquate pour obtenir un large échantillon. Elle s'appuie sur un questionnaire, outil classique des recherches en sciences sociales, composé de 27 questions.

L'observation, également classique en sciences sociale, est une méthode d'observation directe, à sens unique. Dans le cadre de cette recherche des observations participantes couvertes sont réalisées.

La théorie ancrée est une méthode quantitative de recherche dont la démarche principale consiste à construire le cadre théorique au moment où se déroule la recherche empirique et non au moment de la revue de la littérature et de la définition des hypothèses. Dans cette thèse, le but est de vérifier si cette méthode est appropriée aux recherches comparatives sur les besoins informationnels des usagers des bibliothèques universitaires françaises et polonaises.

La totalité des 3789 doctorants actuellement inscrits au sein des différents départements de l'Université de Varsovie (1771 doctorants) et des cinq écoles doctorales des trois universités de Lille - Lille 1, Lille 2 et Lille 3 (2018 doctorants) ont été invités à participer à l'enquête. L'étude comparative a été menée sur un échantillon de 578 doctorants (317 français et 261 polonais) qui ont répondu en ligne au questionnaire. Les conclusions principales de cette recherche mettent en évidence un usage limité des revues scientifiques par ce groupe d'usagers des bibliothèques universitaires dû aux raisons suivantes: absence de formation à la maîtrise de l'information spécialisée dédiée aux doctorants (dans le cas de la Pologne) et absence de promotion, ou plutôt de vulgarisation, d'une offre de formations de ce type auprès des doctorants et des enseignants qui pourraient encourager leurs étudiants à y participer (dans le cas de la France). Les recommandations formulées à l'égard de l'Université de Varsovie proposent un développement de la formation à la maîtrise de l'information et celles formulées à l'égard de l'Université de Lille encouragent une promotion plus effective de l'offre de formation déjà existante.

Dans les deux parties suivantes de cette thèse, nous présentons les problèmes et les approches possibles pour l'élaboration deformations à la maîtrise de l'information,en nous basant sur les résultats de la recherche comparative et après avoir discuté les différents aspects pédagogiques nécessaires au déploiement d'une formation à la maîtrise de l'information. Un cadre pour l'élaboration d'un programme éducatif dédié à la maîtrise de l'information et

destinés aux doctorants est alors présenté. Le programme s'adresse aux doctorants de première année qui sont au début de leurs recherches.

Mots-clés : maîtrise de l'information, doctorants, formation à la maîtrise de l'information, études d'usagers, revues scientifiques, théorie ancrée, études comparatives, maîtrise de l'information – France, maîtrise de l'information – Pologne, bibliothèques universitaires – France, bibliothèques universitaires - Pologne

Streszczenie w języku polskim

Celem badań omówionych w rozprawie było: przedstawienie zagadnienia edukacji informacyjnej (ang. *information literacy*) z perspektywy dotychczasowych prac w tym zakresie, w szczególności prowadzonych we Francji i w Polsce, ocena doświadczeń, wiedzy i umiejętności francuskich i polskich słuchaczy studiów doktoranckich w zakresie korzystania z zasobów czasopism naukowych udostępnianych przez biblioteki akademickie oraz przygotowanie programu edukacyjnego skierowanego do doktorantów, opartego na międzynarodowych standardach edukacji informacyjnej, którego głównym celem jest zwiększenie wykorzystania czasopism naukowych.

W rozdziale pierwszym, na podstawie literatury przedmiotu przedstawione zostały wypracowane dotychczas koncepcje i modele edukacji informacyjnej, interpretacja związanych z nią problemów badawczych i terminologii stosowanej do ich opisu w polskim i francuskim piśmiennictwie przedmiotu oraz stan badań w tej dziedzinie w Polsce i we Francji. Omówione w następnym rozdziale badanie porównawcze wśród francuskich i polskich doktorantów miało na ceku zweryfikowanie hipotezy o niskim wykorzystaniu czasopism naukowych przez doktorantów oraz znalezienie odpowiedzi na pytanie, jakie działania powinni podjąć bibliotekarze i wykładowcy, aby je zwiększyć.

W badaniu wykorzystane zostały trzy metody: ankietowe badanie sondażowe, obserwacja i teoria ugruntowana.

Ankietowe badanie sondażowe wybrano jako metodę najbardziej odpowiednią w dotarciu do dużej liczby badanych. Ankieta bazowała na kwestionariuszu – najpopularniejszym narzędziu badawczym wykorzystywanym w naukach społecznych. Kwestionariusz składał się z 27 pytań.

Obserwacja to klasyczna metoda stosowana w badaniach społecznych. Jest to metoda bezpośrednia, jednokierunkowa. W przypadku niniejszej rozprawy zastosowano metodę ukrytej obserwacji uczestniczącej.

Teoria ugruntowana to jakościowa metoda badawcza, zakładająca rozwijanie teorii na podstawie systematycznie zbieranych i analizowanych danych, a nie w oparciu o przegląd piśmiennictwa i definiowanie hipotez. W niniejszym badaniu zastosowano teorię ugruntowaną w celu sprawdzenia, czy ta metoda może mieć zastosowanie w badaniu porównawczym potrzeb informacyjnych francuskich i polskich użytkowników bibliotek.

Prośba o udział w badaniu ankietowym skierowana została do wszystkich 3789 doktorantów zarejestrowanych obecnie na studiach doktoranckich prowadzonych przez różne wydziały na Uniwersytecie Warszawskim (łącznie 1771 doktorantów) i w pięciu szkołach doktorskich prowadzonych na trzech uniwersytetach w Lille: Lille 1, Lille 2 i Lille 3 (łącznie 2018 doktorantów). Badania porównawcze przeprowadzone zostały na próbie 578 doktorantów (317 francuskich i 261 polskich), którzy wypełnili rozesłaną ankietę online. Głównymi wnioskami z badań dotyczącymi przyczyn ograniczonego wykorzystywania zbiorów czasopism naukowych przez tę grupę użytkowników bibliotek akademickich są: brak wyspecjalizowanej edukacji informacyjnej, skierowanej do doktorantów (w przypadku Polski) oraz brak promocji czy popularyzacji edukacji informacyjnej wśród doktorantów i wykładowców, którzy mogliby zachęcać studentów do uczestniczenia w szkoleniach (w przypadku Francji). Główną rekomendacją w przypadku Uniwersytetu Warszawskiego jest rozwinięcie oferty szkoleń z zakresu edukacji informacyjnej dla doktorantów, a w przypadku Uniwersytetu Lille – bardziej efektywna promocja istniejącej oferty szkoleń.

W dwóch kolejnych częściach rozprawy przedstawiono problemy i podejścia do projektowania programów edukacji informacyjnej, a na podstawie wyników przeprowadzonych badań porównawczych i przedyskutowanych zagadnień pedagogicznych zaproponowano zarys szkolenia z zakresu edukacji informacyjnej dla doktorantów. Program skierowany jest do studentów pierwszego roku, będących na początku swojej pracy badawczej.

Słowa kluczowe: edukacja informacyjna, information literacy, doktoranci, szkolenie użytkowników bibliotek, badania użytkowników, czasopisma naukowe, teoria ugruntowana, badania porównawcze, edukacja informacyjna – Francja, edukacja informacyjna – Polska, biblioteki akademickie – Francja, biblioteki akademickie – Polska

The central goal of information literacy is to instill in students a sense of the process of learning from a variety of sources of information and skills to construct their own understandings from that information

(Kuhlthau, 2004, p. 164)

Introduction

The decision to investigate the research problem stated in the title of this dissertation has had its roots in the field work of the author of this thesis. Observations made during several years of work as a practicing librarian, a head of section of acquisition in the Serials Department of the University of Warsaw Library (UWL) showed that the level of use of scientific journals is low. There is no correlation between the budget spent on electronic journals or foreign printed journals and journals use statistics. The same in the case of Polish printed journals; However in this case there is no problem of budget spent on journals purchase (as UWL receives a legal copy of all Polish publications), but the problem of human work and the costs of registering, cataloguing, binding, storing, etc. This problem has been observed since 2004 at UWL. In 2009 the author became a member of IFLA Serials and Other Continuing Resources Section as well as IFLA Information Literacy Section. This was an opportunity for starting to observe the current trends and participate in works on the international forum. This wider, global perspective brought also the idea of investigating and implementing the international concepts at Polish field.

Whilst familiarizing with the domain of information literacy, the direct relationship between the IL education and the use of the holdings offered by libraries was observed. Thanks to well-implemented and complex IL education students become aware and well-oriented users of information. The library can offer an expanded collections, rich in documents in different formats and languages, however the offer is not synonymous with the use. During several professional placements held in foreign university libraries (in Germany, France, Norway, and the UK) the author could observe the users' instructions, primarily aimed at information searching. That is how the

hypothesis of a low use of scientific journals related to insufficient IL education was established. This was the starting point of the idea to conduct a doctoral research focused on this subject.

Paulo Freire wrote in "Learning to question. A pedagogy of liberation" (Freire & Faundez, 1989), „any thesis, like all research, must begin by identifying the key questions to be answered (...), those questions and the answers to them will constitute an academic thesis" (p. 39).

The aim of this thesis is to find the answers on the developed research questions and to investigate the identified research problems as follows :

1. Why do students rarely use scientific journals?

2. Is it related to the library offer?

3. What should be done in order to increase the use of scientific journals?

To verify the hypothesis and to answer the research questions, the doctoral students were chosen as a target group. Doctoral students can be perceived as advanced users of information. They are not only students, but also researchers and, in many cases, lecturers as well. Thus, it can be assumed that they use information sources not only for the purpose of their PhD dissertation. Besides, the Bologna Process legitimised doctoral studies as the 3rd cycle of higher education and put on doctoral training many requirements that have not existed before.

All issues described above influenced the choice to investigate this group of academic libraries users.

Doctoral students at University of Warsaw were a natural and evident target group – the author was first studying and then working at this university. University of Lille was chosen after enrollment in doctoral studies there and the French Government Scholarship award that allowed to pass in total fifteen months in Lille in order to conduct the research.

All these factors impacted on designing the hereby presented.

The following research process was adopted in order to realise this goal.

First, the study instrument was selected and the survey was elaborated, basing on the review of literature in the domain of social research and the results of some published user studies conducted in libraries (see for ex. Al-Saleh, 2004; Babbie, 2008; Benjes-Small, Dorner, & Schroeder, 2009; Pickard, 2007). While conducting the study, i.e. setting the online survey and promoting it among doctoral students, the preliminary gathering of publication for review of literature was realised that allowed to develop the theoretical framework of this thesis and to prepare the plan of Chapter 1.

Secondly, the data analysis was conducted with the application of grounded theory; and the findings of the study for each university were identified and discussed.

Thirdly, the comparative research was prepared, what resulted in identification of major contributions, limitations, implications, and further studies directions (presented in Chapter 2). This stage indicated also the need of deepen investigation and discussion of theoretical frameworks of pedagogy necessary for elaborating and implementing the IL education programme.

Fourthly, a revisit of literature was made in order to explore the pedagogical issues in the context of IL (see Chapter 3) and to see into the selected IL education programmes dedicated to doctoral students, offered by the European universities (see for ex.: Clinch & Jones-Evans, 2007; Denecker & Durand-Barthez, 2011; Malingre, Serres, Sainsot, & Le Men, 2013; Skagen et al., 2008).

Fifthly, in order to complete the research in a constructive way, the framework of IL education programme for doctoral students was elaborated. This programme can be applied both in Polish and French academic libraries (see Chapter 4).

Above, the continuous referring to the body of literature was highlighted several times.

Actually, this thesis contributes to studies on IL also by reviewing the international literature of the subject. The literature analysed and presented in this thesis covers the wide spectrum of international publications. The French and Polish national catalogues (respectively: SUDOC and NUKAT) were searched as well as all indexed services and databases available at the University of Warsaw and the University of Lille 3. Some material has been obtained from recent conferences. Moreover, the big number of publications recalled here are not available in the French and Polish libraries neither in printed nor in electronic version, so they were not known before to the readers in both countries nor used for monographs in the domain of IL published earlier in France and Poland (like for ex. Denecker & Durand-Barthez, 2011; Jasiewicz, 2012; Kurkowska, 2012). These publications were ordered especially for the purpose of this dissertation from other countries by Inter Library Loan (ILL) or gained thanks to author's professional contacts at international LIS forums, organisations, and associations. As they are not accessible widely neither in France nor in Poland, in some cases they were discussed broader, with longer quotations in order to familiarize the readers with these bibliographic positions.

The author's wish was to present the most up-to-date references. That is why the biggest number of bibliographic corpus presented in this thesis come from years 2003-2013. Statistically, the year of publication and the number of works cited is as follows: 2013 – 2; 2012 – 13; 2011 – 10; 2010 – 6; 2009 – 14; 2008 – 10; 2007 – 13; 2006 – 12; 2005 – 11; 2004 – 13; 2003 – 11; 2002 – 4; 2001 – 2; 2000 – 8; 1999 and earlier – 11 positions. Besides, eighteen publications not directly related to IL or user studies were used. These were the methodology books and articles that became very useful for the purpose of preparing the comparative study. Publications used for this dissertation come from English, French, and Polish languages. In overall number of 159 references, there are 97 in English, 39 in French, and 23 in Polish.

This dissertation is organised in the following manner:

Chapter 1 provides the deepen review of literature, presenting the background of IL in France and Poland. It also brings the reflection on how IL is perceived in higher education of France and Poland, what is its main goal and what is the way to obtain this goal. The literature review also shows the similarities and differences of the national specificity in the approach to IL.

Chapter 2 presents the empirical study conducted among the doctoral students at the University of Warsaw and the University of Lille. In this chapter the methodological aspects of the study are described, data analysis provided and interpreted, and the comparative study is offered. The chapter concludes with major findings, contributions, implications, limitations, and further studies directions.

Chapter 3 is dedicated to the issues related to designing IL education. It concentrates on students' attitudes and expectations, pedagogical considerations, collaboration between librarians and faculties, and embedding IL into curriculum.

Chapter 4 describes the stages of preparing IL education in academic libraries, discusses the selected existing IL courses for doctoral students (in France, Norway, Poland, and the United Kingdom) and provides the detailed draft of the course for doctoral students titled "My first publication".

The dissertation is complemented with a comprehensive list of cited references, appendices with the most important documents noted in the thesis, a small English-French-Polish dictionary providing the most important terms used in the dissertation as well as with the index of terms and authors.

Chapter 1. Information literacy as research problem

This chapter reviews and discusses the literature related to Information Literacy (IL[1]). The scope of the review of the literature is rather selective than comprehensive, it provides the context for the problem to be investigated. The theoretical foundations of the concept of information literacy are discussed, too. Also the biggest worldwide initiatives related to information literacy are presented, as they found their place in the literature and they are often cited by many authors. As IL is one of the most investigated subjects in modern LIS, it is not possible to review all existing literature. Studies recalled by Tuominen, Savolainen and Talja say that in years 1973-2000 there were more than five thousand publications dealing with IL (Tuominen, Savolainen, & Talja, 2005). Taking into account that a real "IL boom" started after 2000, it can be assumed that currently there are several thousand of publications on the topic. Inspired by the scoping studies approach (Arksey & O'Malley, 2005), and reflecting time and relevancy, the review of literature presented in this chapter concentrates primarily on IL in academic environment and included mostly those studies and papers published after 2000. The exceptions were the descriptions of historical outlines of the IL concept where the literature dating back to the 1990s. was reviewed.

This chapter is divided into six sections. Section one investigates conceptual understandings of information literacy, definitions of the concept, diverse interpretations, various models, frameworks, and IL standards. Section two presents all aspects of libraries and librarians' involvement in IL: bibliographic instructions, collaboration between library and faculty as well as need of permanent evaluation of IL programmes. Section three highlights French and Polish translation problems. Section four focuses on IL state of the art in Poland and France. Section five examines selected national and international organizations and institutions involved in IL undertakings.

[1] The complete list of all acronyms used in this chapter is provided in Appendix 1.

Finally, the sixth section is dedicated to emphasize the difference between the terms “information literacy” and “information culture”.

1.1 Conceptual understandings of information literacy

1.1.1 The basic approach. Definitions of information literacy

To describe the concept of information literacy (IL), it is good to take as a starting point the condensed definition that underlines all the most crucial aspects and summarizes the issues that will be discussed into details later on in this thesis. However, the widely described in literature problem is that there is no one, universally accepted definition of the IL concept. “This is a complex phenomenon, which can be analyzed from several perspectives” (Basili, 2006, p.3). Demo (as cited in Behrens, 1994) adds that perspective depends on whether librarians, educators, or communication experts define the term. That is why, for the beginning, the definition from the encyclopedia was taken to outline the IL key issues. This definition was found in the International Encyclopedia of Information and Library Science (Feather, 2003). It is divided into four parts which describe the concept itself as well as the factors which will be the subject of this research. These are: 1. ways of seeing IL; 2. a brief history of IL; 3. IL programmes; 4. IL research.

As mentioned above, this encyclopedic definition is one of several definitions of IL presented in the literature. To better understand the multiple conceptions and theories, some of them will be provided here.

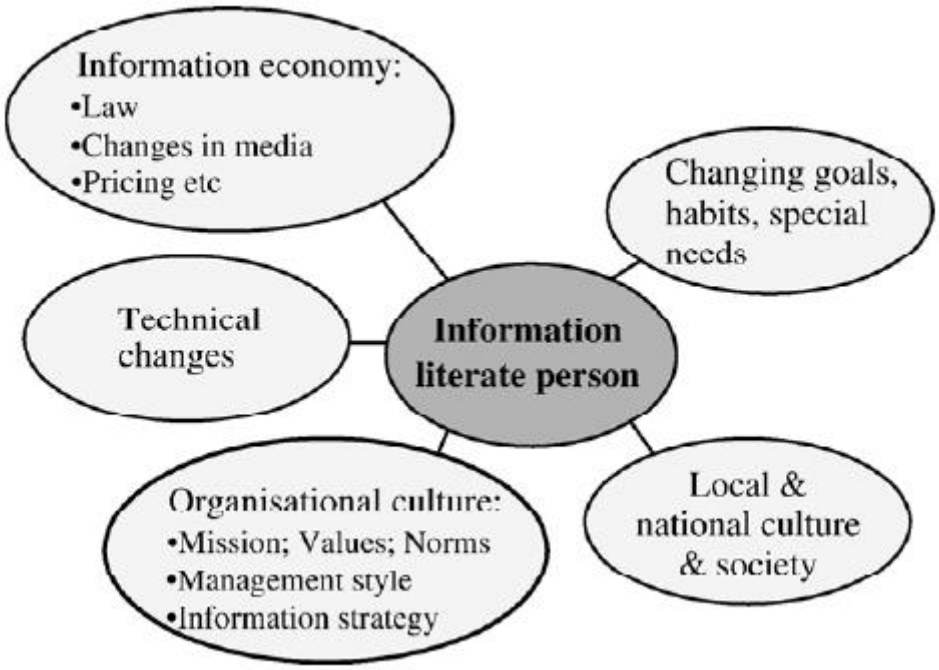
IL is commonly described as the ability to access, to evaluate and to use information. It is also described as a way of learning, or as a conglomerate of ways of experiencing information use (Feather, 2003, p. 261). But still, the most recognized and the most frequently cited definition of IL is that proposed by American Library Association (1989):

> To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information. Producing such a citizenry will require that schools and colleges appreciate and integrate the concept of information literacy into their learning programs and that they play a leadership role in equipping individuals and institutions to take advantage of the opportunities inherent within the information society. Ultimately, information literate people are those who *have learned how to learn*. They know how to learn because they know how knowledge is organized, how to find information and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand.

The ALA's definition, published for the first time in the report of the ALA Presidential Committee on Information Literacy was a milestone in the development of IL concept as the report was published worldwide. This is the opinion of Shirley Behrens (1994) who in the mid 1990s. published the paper on historical overview of IL concept. After almost 20 years this paper might be also perceived as historical, however that time she highlighted the most important trends in IL development and her opinion on ALA's definition is still valid – although afterwards there have been several attempts to define IL, this definition remains the most recognised.

Johnston and Webber (2006) presented in a schematic way the several attributes concerning an information literate person situated in the information society (Fig. 1).

Figure 1. The information literate person situated in a changing information society



Source: (Johnston & Webber, 2006, p. 111).

In their definition, IL is:

> The adoption of appropriate information behaviour to identify, through whatever channel or medium, information well fitted to information needs, leading to wise and ethical use of information in society, (...) seen not only as a personal experience of need and fulfillment, but also a socialized activity (Johnston & Webber, 2003, p. 336).

For Johnston and Webber, research on IL should be treated as a soft applied discipline, so they distinguish IL form information science. Discussing the IL backgrounds, they posit that IL "draws on theory, and research approaches, from sociology, psychology, management studies, and media/communication studies to illuminate needs, situations, and behaviour" (Johnston & Webber, 2006, p. 116).

Johnson and Webber see IL backgrounds in different disciplines; however, while talking about the beginning of IL, in the literature always the name of Paul Zurkowski is mentioned as the originator of this term in the 1970s. Although, as it is written in the encyclopedic definition,

> Since then, the concept has been taken up mainly by information specialists, and promulgated worldwide through the work of American Library Association (ALA) and the National Forum for Information Literacy. By the end of the twentieth century, IL could be said to be a truly global phenomenon, with interest evident across all continents and sectors (Feather, 2003, p. 262).

The anecdotic is the fact that the creator of the term which is currently engaging all LIS circles was not a librarian, but a lawyer with interests in intellectual property, copyright, and business. He was the president of the Information Industry Association and when he coined the term IL, he was not thinking specifically about library orientation or bibliographic instruction (Badke, 2010).

In 1992 Christina S. Doyle defined the literate person. Her definition became the base of international standards and IL education models worked out later. According to Doyle, an information literate person is the one who:

> Recognizes that accurate and complete information is the basis for intelligent decision making; recognizes the need for information; formulates questions based on information needs; identifies potential sources of information; develops successful search strategies; accesses sources of information including computer-based and other technologies; evaluates information; organizes information for practical application; integrates new information into an existing body of knowledge; uses information in critical thinking and problem solving (Doyle, 1992).

For Andretta and Cutting (2003), IL is "an essential attribute of the independent learner, consisting of ICT skills as well as more complex information handling competencies" (p. 202).

The IL belongs to the field of interest of specialists in: media studies, education, computer science or cultural studies (Rozkosz, 2010). However, as

Webber & Johnston (2006) noticed, most of the definitions of information literacy have been in terms of the information literate person rather than of IL itself. It should be noticed also that the vast majority of the literature on IL has been written by librarians, and there are clear links with earlier discussion and practice of bibliographic instruction and library skills training. The evolution from library instruction to information literacy will be discussed further in this chapter, while describing the researches in the domain of IL, conducted by or with practitioners and implementing the IL programmes into academic curricula. Defining of the information literate person and not the concept itself is most probably due to the fact that in the librarians' centre of interest there is a user primarily and improvement of his/her skills in acquiring and using information, not just pure research, investigating the nature of IL. Librarians, as practitioners, focus more on the research in practice, which they conduct themselves, or applied research, addressing problems pertinent to practice (Feather, 2003, pp. 262-263).

Derfert-Wolf (2009) noticed that the practical interest of IL is the biggest in the librarians' community, because for a long time they have been educating users during traditional library instructions, independent from the education programmes on particular faculties. Catts and Lau (2008) add that research and activities in IL in English-speaking countries have been focused both on schools and higher education, while in non English-speaking countries, the focus of IL research has often been primarily on universities. This is also the case of France and Poland what will be discussed later.

Annemaree Lloyd in her article *Information literacy: the meta-competency of the knowledge economy* (Lloyd, 2003) proposed another interesting definition of IL. According to her, IL is a "meta-competency that engages generic skills such as defining, locating and accessing, evaluating and synthesizing information" (p.90). She wrote also about literate person. However, not only in the context of school or university, but in a workplace. This shows that IL skills learnt during school years can be beneficial long afterwards. Lloyd writes:

> Information literacy is more than just the routine application of a particular set of operational information skills: it is a way of knowing. Information literate individuals understand and know the context of their information environments and the ways in which information is organized into information caches (…). The information literate employee is a critical thinker and problem solver. Information literate individuals have developed the ability to make informed decisions based on the ability to integrate and synthesize operational and cognitive information that is gained through the engagement and interaction with information environments, information systems, resources, information services, colleagues and other individuals (…). The information literate individual knows how to engage and deal with information, how to find it, how to construct and reconstruct it to solve problems effectively, to create solutions to novel situations and to form new knowledge pathways (…).The information literate individual is an expert within the specific workplace environment, with the ability to adopt and adapt, create and recreate, contextualize and recontextualize (p. 89).

The Lloyd's definition is very close to this proposed by the creator of the term IL. Paul Zurkowski posited (as cited in Kurkowska 2008) that "information literate" people are those who are properly prepared to apply information in a workplace, who learnt the methods and skills needed to use the wide spectrum of information tools as well as primary resources letting them to solve the problems.

Carla Basili (2006) presents two definitions of IL: 1. IL as process and 2. IL as status.

> 1. (as process) educational process, of political derivation, that aims at spreading in a population a minimum level of competencies for the retrieval, evaluation and exploitation of information from a variety of sources. 2. (as status) social objective of educational policy; state or condition, result of a process; to have acquired the competence to retrieve, evaluate and use information from a variety of sources (p. 3).

However, as Chevillotte (2005) concludes, the essential is that everybody would be able to use the acquired information skills in different situations. This kind of approach, related to the acquisition of skills, is the most common for authors coming from librarians' community. It has its roots in the evolution from library (skills) instruction to the applying of IL concept – both are linked with the idea of teaching and learning in libraries.

Lloyd defines IL as an umbrella of meta-competency (Lloyd, 2003), while Wallis (2005) understands IL as the overarching term to describe the skills needed to use information and communication technologies (ICTs) effectively and to access appropriate digital information resources. The definition of Khan is close to this proposed by Wallis. Khan defines IL as "the skill to use information and communication technologies and their applications to access and create information" (as cited in Loicq, 2009, p. 78).

Horton (2007) highlights:

> The concept of "information literacy" cannot be traced to the work of a single author. Nor to a single study or a single stream of research. Nor to a single driving force or cause (...). Rather, the idea reflects a convergence of thinking from many developments, disciplines, sectors and areas of research (p. 1).

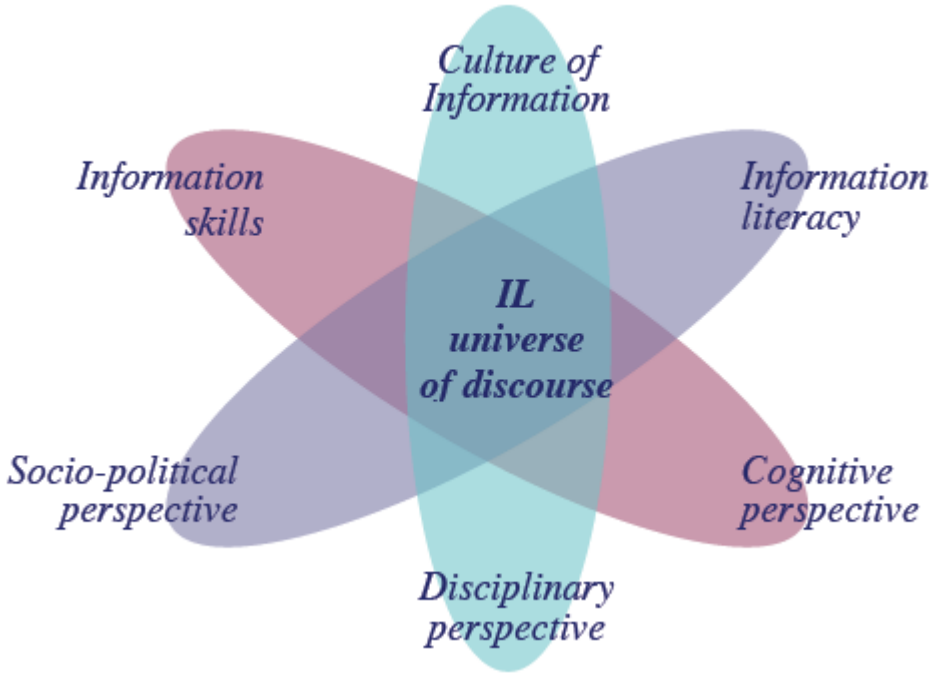
IL is a complex concept which does not have one definition. This review of literature confirms also that there exist many alternative ways of defining and understanding IL.

Sylvie Chevillotte (2007) concluded the divagation on information literacy:

> The real issue [of IL – ZW], beyond the definitions, is to arrive to apply and make known the need of capacity building and critical analysis of pupils, students and citizens. The control of information is one of the key elements of this learning, it is not the only and must not remain isolated (p. 19).

Carla Basili presented perspectives from which the IL is analyzed by the diagram shown in the Figure 2.

Figure 2. Perspectives of analysis of the Information Literacy discourse



Source: (Basili, 2006, p.3).

In conclusion the most relevant IL definition for the purpose of the study presented in next chapters of this thesis must be indicated. As Lloyd (2006) notices, the understanding of IL depends on the way how "IL practices are explored and understood within a landscape" (p. 577). Thus, from the perspective of the current research, IL is perceived from the educational landscape and can be defined as a set of skills and competencies essential to become an independent and self-confident user of information. This definition goes along with others, describing IL as a skills-based literacy. And has little in common with information culture (the term discussed in detail in section 1.6).

1.1.2 Interpretations of information literacy. Multitude of literacies

As it is written in the *International Encyclopedia of Information and Library Science*:

> IL is closely related to the ideas of information skills and information technology (IT) literacy. Sometimes, information skills are considered to be one aspect of IL. They may also be

> seen as the tools that assist the development of IL, in the same way that study skills may assist the process of learning. The concepts of IL and IT literacy are usually distinguish to demonstrate the difference between the intellectual capabilities involved in using information, and capabilities required for using technologies that deliver or contain 'information' (Feather, 2003, p. 261-262).

The interpretation of information literacy varies considerably, from the attainment of computer literacy to the development of library skills, and it also includes the control of information and the establishment of knowledge construction (Andretta, 2005).

As noted earlier, the term IL was used for the first time in the 1970s, however the real debate on the concept started in the USA at the beginning of the 1990s. Currently, IL is a well-know, widely understood and accepted term, so it is hard to imagine that twenty years ago the real discussion was held in the literature on this new issue. Authors (mainly librarians) were arguing about all aspects related to IL: its meaning, definition, scope and general sense of its implementation into educational programs. The article written by Snavely and Cooper (1997) gives a good summary of this debate. The arguments concerned the word "literacy" – which, according to some authors, carried the connotation of "illiteracy" and "continuing implication that libraries are dealing with clients on basic or even on a remedial level" (p. 10). For some librarians, IL was an "abstraction". The adversaries of a new term were arguing that the phrases like: *bibliographic instruction*, *library skills* or *library instruction* have been already well established in the nomenclature and there was no need to change them. After twenty years, we can observe that, especially in Anglo-Saxon world, the phrase *information literacy* has been well established, too. It can be an argument for continuing the works on French and Polish fields to find the best equivalent in these languages, legitimize this term and continue works on a new concept with new standards which is IL and no more *library instruction* or *library training*. It can be concluded that the Anglo-Saxons successfully realized one of the postulates, also included in the cited article: "Information literacy should not

be instruction with a new name" (p. 13). Although, the past discussion in American LIS community was so advanced and there were so many antagonists of introducing the term IL into LIS vocabulary that they even prepared a list of suggestions for terms to use instead of IL. Because in French and Polish literature there is still an ongoing debate on the vocabulary and terms related to IL, this list is presented below, however with the note that, despite all these passionate debates from the beginning of 1990s, in Anglo-Saxon world the term IL finally dominated the literature and is being used currently. While analyzing the Table 1, it can be noticed that, apart from some terms invented to attract the students, the majority is the synonyms of IL used even nowadays to describe the set of skills consisting the IL.

Table 1.1. Suggestions for terms to use instead of Information Literacy (Source: Snavely & Cooper, 1997, p. 11).

Abstractionism	Know How
Bibliographic Instruction	Know How to Know How
Critical Thinking	Knowledge "R" Us
Curiosity Satisfied-across-the-Curriculum	Library Appreciation
Gathering	Library Experience
Global Informatics	Library Instruction
Hyperopism	Library Literacy
Info "R" Us	Macropism
Information Competence	RAFT (Reach and Find-Think)
Information Discovery	Reading and Research
Information Empowerment	Reading-across-the –Curriculum
Information Gathering	Research
Information Inquiry	Research Mapping
Information Mapping	Research-across-the-Curriculum

Information Research	Seek and Find (Seek 'n Find)
Information Sophistication	The Question Authorities
Inquiry	Virtuous Instruction
IRAC (Information-Research-across-the-Curriculum)	WHAT (Wonder, Hunt and Think)

To complete the above list and to present the currently used terms related to IL, the list offered by ERIC (Education Resource Information Center)[2] Thesaurus may be presented as well. These are: Users (Information), Access to Information, Computer Literacy, Information Seeking, Information Skills, Information Utilization, Librarian Teacher Cooperation, Library Instruction, Library Skills, Online Searching, Scientific Literacy, Search Strategies, Technological Literacy. This shows the spectrum of the term. From this research point of view the two most important relations are: Librarian Teacher Cooperation and Library Instruction.

As Lidia Derfert-Wolf writes (2009), nowadays many initiatives and programmes basing on IL concept use the term "information and communication technology (ICT) literacy". This happens especially in the USA. In the UK, the terms IL, "information skills", and "IT skills" are used alternatively. The terms "user education" and "library instruction" still remain in use, even when they are related to the trainings organized according to IL models (p.189).

She writes also that the term "information and communication technology (ICT) literacy" comes from the term "information technology" (IT). Some of the authors use ICT literacy as a synonym of IL, however the most often it is used while discussing the digital technology and Internet tools. The term "digital literacy" or "e-literacy" is used in the relation to the skills of reading and understanding the multimedia text and hypertext (p. 189).

[2] *ERIC*, the Education Resource Information Center, contains more than 1,300,000 records and links to more than 323,000 full-text documents dating back to 1966. It is provided by EBSCO.

However, in Batorowska's (2009) opinion, replacing the computer literacy by media literacy (or inversely) is not a good idea. Whereas integration of these two literacies would let to juxtapose the cultural aspect of education with the technical purposes, i.e. proficient use of media tools which are the tools necessary nowadays for intellectual work. Batorowska advocates for implicating in the school curricula the compulsory course which could be named "media education" (Pl. *pedagogika medialna*) or "information culture" (Pl. *kultura informacyjna*). Media education is a term with a long tradition dating back to 1982 when UNESCO Grunwald Declaration on Media Education [3] was proclaimed.

David Bawden (2001) mentiones also "network literacy" and "digital literacy". Both concepts are linked with the IT skills. The first one describes the Internet skills and might be also called "hyper-literacy"; the second one defines the capacity of understanding of multimedia, where the information is transmitted under several digital formats from different sources.

Bawden notes also the term "media literacy". This term is often met in the literature. It is used to describe the skills related to acquisition, analysis, evaluation and creation of information in different formats. Sometimes media literacy is discussed to be the skill precedent to IL. Some authors regard these two literacies as equivalent. Some of them see the closeness of these terms. For example, Horton (2007) enumerates the list of "21st century survival literacies". These are: the basic or core functional literacy fluencies (competencies) of reading, writing, oralcy and numeracy; computer literacy; media literacy; distance education and e-learning; cultural literacy; and information literacy. He writes that "they should be seen as a closely-knit family" (p. 3).

Media literacy has arisen once again in the 21st century thanks to the Moscow Declaration (see details in section 1.5.1).

[3] Available at : www.unesco.org/education/pdf/MEDIA_E.PDF [Retrieved: 31 May 2013] and in Appendix 2.

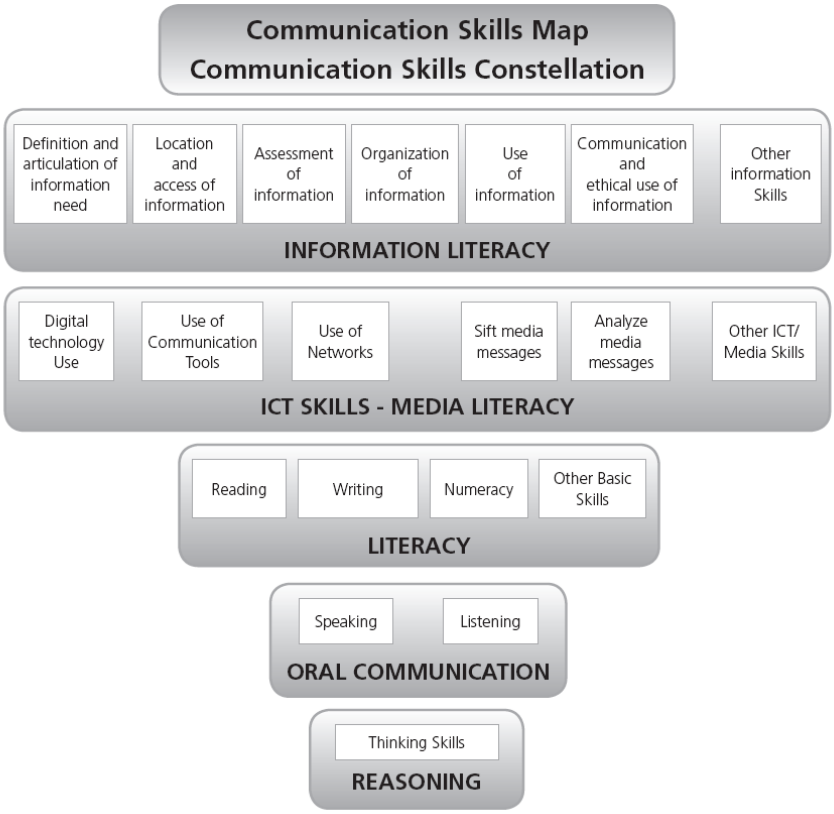
According to Kurkowska (2008), the distinction of different categories of IL is made because the term “literacy” can be considered on three levels. On the first one, “literacy” is related to letters and numbers and it is the traditional understating of this term. On the second level, it is considered an ability to communicate using different languages, codes, and technologies. The third, the latest one, is more complex and related to the functional approach to the problem. That is why some authors enumerate several categories of this phenomenon, like: “information literacy”, “media literacy”, “visual literacy”, “cultural literacy”, “technological literacy”, “computer literacy”, etc.

According to Pasadas (as cited in Catts & Lau, 2008),

> Writing, reading and numerical skills are at the base; followed by ICT and media skills, communication tools and use of networks. Above these strata are IL skills that include identifying an information need, the capability to locate, retrieve, evaluate, and use information, and to respect intellectual property in communicating information and knowledge (p.17).

Catts and Lau (2008) proposed a simple chart to illustrate the theory of Pasadas (Fig. 3).

Figure 3. Communication Skills Map. Communication Skills Constellation

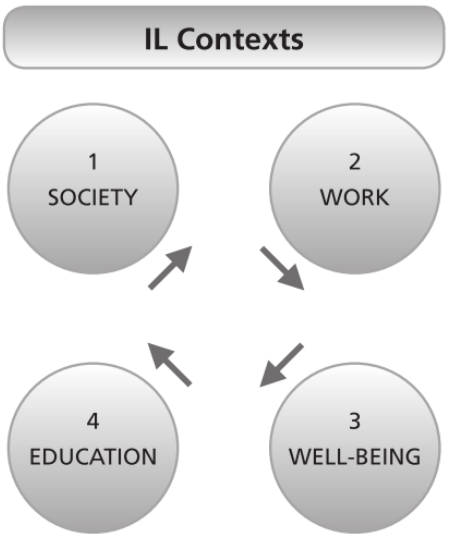


Source: Catts & Lau, 2008, p. 18.

While describing different aspect of IL, the different contexts of this issue should be also mentioned. As Garner marked (cited in Catts & Lau, 2008), The Alexandria Proclamation[4] made it evident that IL needs to be considered not only in relation to education, but also in the broader context of work, civil society, and health and well being. Figure 4 illustrates discussed contexts.

[4] The Alexandria Proclamation was adopted in Alexandria, Egypt at the Bibliotheca Alexandrina on 9 November 2005. The full text is provided in the Appendix 3.

Figure 4. Information Literacy contexts



Source: Catts & Lau, 2008, p. 9.

The definition presented by Horton (2007), introduces also the terms "critical thinking", "learning to learn", "information competency", and "information fluency":

> Information Literacy means the set of skills, attitudes and knowledge necessary to know when information is needed to help solve a problem or make a decision, how to articulate that information need in searchable terms and language, then search efficiently for the information, retrieve it, interpret and understand it, organize it, evaluate its credibility and authenticity, assess its relevance, communicate it to others if necessary, then utilize it to accomplish bottom-line purposes; Information Literacy is closely allied to learning to learn, and to critical thinking, both of which may be established, formal educational goals, but too often are not integrated into curricula, syllabi and lesson plan outlines as discrete, teachable and learnable outcomes; sometimes the terms "Information Competency," or "Information Fluency" or even other terms, are used in different countries, cultures or languages, in preference to the term Information Literacy (p. 53-54).

It indicates that IL can be useful broader, not only for learning purposes, but in many life situations.

1.1.3 Various models, frameworks and standards of IL

All normative documents in the domain of IL have a general character, allowing professionals for introduction of own principles and their adjustment to the needs of a target group. All published standards have the similar foundation. All aim at recognizing an information need and the capability to locate, evaluate, store, retrieve, and apply information (Catts & Lau, 2008). Each documents contains standards and indicators and their number can differ, but generally they always concentrate on three issues: (1) information skills, i.e. recognition of need, location of information (the choice of sources), critical evaluation of information, systematisation and use of information; (2) independent learning, i.e. effective improvement of acquired skills and enhancement of information skills level; (3) knowledge sharing, i.e. active participation in modern democratic and information society. Hence, generally standards, frameworks, and guidelines aim at contextualising IL.

First formulations of IL standards were developed in the late 1980s. for use in school library systems in the USA. The early model was created by the American Association of School Libraries.

The best known and the most popular are standards worked out by ACRL (Association of Colleges and Research Libraries), ANZIIL (Australian and New Zealand Institute for Information Literacy), and SCONUL (Society of College, National and University Libraries). Susie Andretta (2005) compared these three IL frameworks. This interesting summary gives the general view of factors taking into consideration during works on the national IL standards (see Table 2).

Table 1.2. Summary of the three information literacy models (Source: Andretta, 2005, p. 42).

ACRL IL standards	**ANZIIL IL standards**	**SCONUL information skills**
An information-literate person is able to:		

1	determine the extend of information needed	**1**	recognize a need for information and to determine the extend of information needed	**1**	recognize a need for information
2	access the required information effectively and efficiently	**2**	find information effectively and efficiently	**2**	distinguish ways in which the information gap may be addressed
3	evaluate information and its sources critically and incorporate selected information into his/her knowledge base and value system	**3**	critically evaluate information and the information-seeking process	**3**	construct strategies for locating information
4	use information effectively to accomplish a specific purpose	**4**	manage information collected or generated	**4**	locate and access information
5	understand many of the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally	**5**	apply prior and new information to construct or create new understandings	**5**	compare and evaluate information obtained from different sources
6	-	**6**	use information with understanding and acknowledge cultural, ethical, legal and social issues surrounding the use of information	**6**	organize, apply and communicate information to others in ways appropriate to the situation
7	-	**7**	-	**7**	synthesize and build upon existing information, contributing to the creation of new knowledge

The standards noted above will not be discussed in details in the current study, as their descriptions and translations can be already found is several publications both in French and Polish languages (see for example: Centre

national de documentation pédagogique, 2009; Jasiewicz, 2012; E. Kurkowska, 2012; Piotrowska, 2011; Tujague Candalot Dit Casaurang, 2004).

In 2006 IFLA published *Guidelines on Information Literacy for Longlife Learning* (Lau, 2006). This document was translated into Polish in 2011. There exists no French translation so far. These Guidelines seem to be the most universal and might have the widest application as IFLA, before publishing this document, had analysed and compared all existing standards of organizations and institutions worldwide. In the results the IFLA Guidelines are easy to apply by the librarians in all types of libraries in different countries.

Both in France and in Poland so far, there have been no uniform national IL standards for higher education. However in Poland, there have been several attempts of standardisation – they are described in section 1.7.2.

1.2 From library instruction to information literacy

> *The shift from books and buildings to bytes and bandwidth is literally and figuratively dismantling libraries, and transforming their textual forms and practices*
>
> *(Kapitzke, 2003, p. 63).*

Traditionally, library instruction, known also as bibliographic instruction or library course took place in the library building and aimed to familiarize the users with the library, its holdings, services, and rules of use. It was some kind of introduction to the library environment, including its resources, services and the psychical collections. According to Encyclopedia of Library History (Wiegand, 1994), "library instruction was often used interchangeably with bibliographic instruction, as they both involve: teaching the use of access tools such as catalogues of library holdings, abstracts, encyclopedias, and other reference sources that aid library users searching for information" (p.6). In fact, it concentrated on using information tools and not information searching and retrieval. It did not teach critical thinking and evaluative skills.

The wide access to the complex information environment changed the role of librarians, from "gatekeepers" to "guides" (Wallis, 2005).

According to Iannuzzi (1999), IL is much more than library instruction as it incorporates conceptual, technical and critical thinking skills. So it "requires an institutional involvement that extends far beyond the library" (p. 304). The mentioned need of broader involvement will be discussed later in this research.

Andretta (2005) underlines the fact that the introduction of IL concept brought a change in library trainings. From tutor-centred (instructions imparted by a tutor at individual or group levels), they shifted to student-centred (with independent learning approach). Also the mode of delivery changed: from library tours and orientation lectures to fully integrated and accredited units that cover information-seeking practices.

Grafstein (2002) broader explains this change:

> Rapid advances in digital technologies have resulted not only in a proliferation of the amount of information available to students, but also in the packaging of that information in an increasing variety of formats. It is within this context that the expression 'IL' has achieved its current popularity. The term embodies a challenge to librarians to extend the skills that they teach beyond instruction in traditional library resources (…). Understood this way, IL – as opposed to library instruction or BI [bibliographic instruction – ZW] – is not restricted to library resources or holdings; it presupposes the acquisition of the technical skills needed to access digital information, and, crucially, it extends beyond the ability to locate information simply to include ability to understand it, evaluate it, and use it appropriately (p. 198).

According to Badke (2010), it is crucial to separate IL from bibliographic instruction, or at least to make bibliographic instruction only a component of a much broader vision. He writes: "when we teach our students about libraries, databases, research questions, and website evaluation, we need a vastly larger vision of what is possible" (p.50).

For Basili (2006), library instruction is limited to holdings and services provided by the library and it is addressed only to library users, while IL "relates to every form of explicit, codified and recorded information, and is addressed to everyone who needs information for study or practical purposes" (p. 5).

Campbell (2004) however concluded that with the change of environment and academic libraries, the definition and terminology used in users' education had to change and broaden as well. She has an opinion that what started as a library orientation grew to be a library instruction and bibliographic instruction and finally became IL. According to Campbell, the IL initiatives and programmes did not cause the revolution, but only an evolution in library trainings. This opinion is also shared by Virkus and Metsar (2004), who wrote that although IL was developing in the past two decades, academic librarians have been involved in user education for many years. The traditional user education is a narrower than IL concept, but it remains still a part of IL.

The authors of the report of inter-ministerial French group, published in 1993 (Serieyx, 1993), noticed the insufficiency of teaching the library users, concentration only on the databases searching and using the library services. They advocated for developing the new "information culture" (Fr. *culture de l'information*), which would give the users the predispositions for good exploration of information and documentation resources in the process of thinking and working. The report postulated "information teaching" (Fr. *formation à l'information*) where the user would find the answer to the question why she/he needs the information. The information teaching would not focus only on the sake of training, but it would also give the sense of searching, the awareness of the information phenomenon and allow user to take the best, conscious decision. The authors of this report marked also that this type of training should be attractive for users, so they could find a pleasure in learning.

But, as Owusu-Ansah (2004) concluded, "the crux remains user instruction, but no longer library user instruction. It is now information user instruction, with all the implications and expectations that the IL movement has come to propagate and stand for" (p. 10).

1.3 Translation problems

The term IL causes translation problems. In literal translation, in non-English speaking countries, "literacy" is a term connoted culturally, in no way equivalent to literacy used in the Anglo-Saxon literature. That is why it is so difficult to transpose it into other cultural worlds (Chevillotte, 2007).

As Le Deuff (2007) noticed, according to Scottish Chambers Dictionary, the term "literacy" has two meanings: 1. the ability to read and write; 2. the ability to use language in an accomplished and efficient way.[5]

All countries that applied the IL concept and created their own standards had to face this task. Two kinds of translation approach can be noticed: the literal and the more descriptive ones. The literal ones (as cited in Kurkowska 2008) are for example: (Rus.) *информационная грамотность*, (Cz.) *informační gramotnost*, (Sl.) *informačná gramotnost*, (Fin.) *informaatiolukutaito*, (It.) *alfabetizzazione informativa*. The second kind is the descriptive translation where the "literacy" is not translated as "alphabetization", but as "competencies". This is probably due to the fact that in these languages the "alphabetization" has the literal meaning of reading and writing skills (like in Polish, what will be discussed below). The selected from various languages terms including word "competencies" are: (Ger.) *Informationskompetenz*, (Du.) *informationskometence*, (Se.) *informationskompetens*, (No.) *informasjonskompetanse*.

As Basili (2006), an Italian researcher, noticed:

[5] Available at: http://www.chambersharrap.co.uk [Retrieved: 15 May 2013].

> The complexity of the IL concept exceeds the literal meaning of the expression, nevertheless, the practice of going back to the literal meaning of the term "literacy" can be of use. As resulting from the etymological and philological analysis of the English term "literacy", this refers to a status, a condition, and in English there is not a verb analogous to the Italian "alfabetizzare", with a similar meaning of "making people to become litterate" (p. 3).

In French and Polish literature there is an ongoing debate on IL terminology. In both countries there have been several terms in use, what will be discussed further in this section, and still one national terminology is not legitimized. Chevillotte (2004) was trying to justify the reason of such situation, saying that IL is a "blur" subject (as Chevillote names it) what also inhibits the establishment of one terminology satisfying everybody. However, she highlights the need of common language for the purpose of European and, more globally, world-wide cooperation. She advocates for elaborating of one common vocabulary which would facilitate not only the cooperation within French-speaking countries on research projects, but also would help in collaboration in international project on IL. Claire Denecker (2003) is of the same opinion and she advocates for finding and accepting one, explicit term to avoid the situation when almost every speaker uses in her/his presentation a different term for explaining the same concept (i.e. IL) what took place for example on the FORMIST conference in 2003.

1.3.1 The Polish language

In Polish literature related to IL, the problems with terminology and definition are widely discussed. Up to 2010 there has been no official translation of the term "information literacy". Probably because there has been no official institution or association that would take the responsibility for legal introducing of IL concept and standards to Polish education system. In Polish literature various terms, describing IL can be found. The literal translation is "alfabetyzacja informacyjna", and this was the term used the most often in the literature, but not too handy in practical use as "alfabetyzacja" is connected with the teaching illiterate people reading and writing skills and in the common use it can have the pejorative association –

if someone wants to give me the course of literacy, does it mean that I am illiterate?

Presumably that is why the authors, who have introduced and described the IL in Polish literature, very often avoided the term "alfabetyzacja informacyjna" and replaced it by more descriptive terminology. Even in the recently edited English-Polish LIS Dictionary (Tomaszczyk 2009, p.120), "information literacy" is translated descriptively as "umiejętności informacyjne, kształcenie w zakresie korzystania z informacji" [information skills, education in the domain of information use – ZW].

Sometimes Polish authors (for example Próchnicka or Rozkosz) prefer to use the original English term, probably to avoid this translation diversity.

Lidia Derfert-Wolf (2009) collated the English synonyms and terms related to IL and their Polish equivalents. It is presented in the Table 3. The term "alfabetyzm informacyjny" is listed on the last place in the table, after all descriptive definitions. It can be caused by the fact that Derfert-Wolf does not like this term, what she underlines in her articles, conference papers and discussions. For the purpose of the study, the French equivalents found in the literature were also included in this table to give the total spectrum of terms in three languages discussed in this research.

Table 1.3. English, Polish and French synonyms and terms related to IL (Source: Chevillotte, 2004, 2005; Denecker & Durand-Barthez, 2011; Denecker, 2003; Derfert-Wolf, 2009a; Le Deuff, 2007; Martin, 2005; Serieux, 1993; Tujague Candalot Dit Casaurang, 2005; Universite Lille 3, 2009).

ENGLISH SYNONYMS AND RELATED TERMS	POLISH EQUIVALENTS	FRENCH EQUIVALENTS
information skills; IL skills; IL competencies; information competence; information competence	umiejętność korzystania z informacji; umiejętność posługiwania się informacją; umiejętność wyszukiwania informacji w różnych źródłach i mediach, jej selekcji, krytycznej oceny oraz przetwarzania jej na	formation à la recherché documentaire ; formation à la recherché d'information ; formation à la méthodologie documentaire ; formation des usagers ;

skills; information problem solving; information fluency; information handling; information empowerments; information technology (IT) skills; information and communication (ICT) skills; ICT literacy; digital literacy; network literacy; e-literacy; media literacy; infoliteracy; user education; library instruction; library orientation; bibliographic instructions; instruction in information skills.	własny użytek; biegłość w użytkowaniu informacji; umiejętności informacyjne; kompetencje informacyjne; edukacja informacyjna; edukacja medialna; sprawność informacyjna; sprawne korzystanie z informacji; świadomość informacyjna; alfabetyzm informacyjny.	formation documentaire ; formation à la maîtrise de l'information ; formation à l'usage de l'information ; éducation à l'information ; formation à l'information ; alphabétisme informationnel ; appropriation de l'information ; compétence informationnelle ; compétences documantaires ; connaissances en recherche documantaire ; culture de l'information ; culture informationnelle ; intelligence informationnelle ; méthodologie documentaire ; méthodologie de l'information ; littératie informationnelle.

Ewa Kurkowska (2008) also discusses the issues related to Polish terminology and translation. She writes that the term IL seems to be quite abstract as in the original it means the elementary reading and writing skills. However, being explored for a long time by the libraries and education environment, it gained the more universal meaning and now it signifies the process of preparing to normal functioning in the society.

But, as she concluded, as long as there is a discussion on the IL concept and terminology in the international literature and it is still ambiguous, in Polish literature there will not be the agreement on one term. The new-established (in 2010) IL Committee within the Polish Librarians Associations named in Polish *Komisja do spraw Edukacji Informacyjnej* (En. *Educational Information Committee*) seems to be a turning point. The Committee started

to promote widely in Polish LIS community the term "edukacja informacyjna" (as the literal one, "alfabetyzacja informacyjna" has been widely negated and criticized) and in fact legitimized that. This term became common in use and after 2010 at least three monographs were published in Poland, having in title the term "edukacja informacyjna" and in content – information literacy issues (see: Jasiewicz, 2012; E. Kurkowska, 2012; Piotrowska, 2011).

And in the latest publication of UNESCO (Horton, 2013) the terms provided as a Polish translation of IL are" "edukacja informacyjna" and "kompetencje informacyjne".

1.3.2 The French language

The most adequate sentence for beginning is "the term *culture informationnelle* can be problematic" (Fr. *le terme de culture informationnelle peut poser problème*). This is the phrase opening the article of Marlène Loicq (2009, p.72) in which she writes also "in the Anglo-Saxon world we talk more easily *information literacy*" (p.78).

In French, similarly as in Polish, the word "literacy" means reading skills and does not have the same meaning as in English. That is why the term chosen by IFLA (The International Federation of Library Associations and Institutions) and UNESCO to translate IL into French is "maîtrise de l'information" [6]. However, two other terms are also frequently used. These are "formation des usagers" (en. users trainings) and "competences informationnelles" (en. information competencies). In the works written not by librarians but scientists, the terms "culture de l'information" and "culture informationnelle" also can be found, used as the synonyms of IL (Juanals, 2003). This understanding of the term is doubtful as IL can not be replaced by "information culture" – what will be explained in the further part of this

[6] For example, see cited earlier in this work the book of F.W.Horton *Understanding Information Literacy : A Primer*, translated as: Introduction à la maîtrise de l'information: une explication, accessible at http://unesdoc.unesco.org/images/0015/001570/157020f.pdf [Retrieved: 31 May 2013].

study. However, in the online *Le grand dictionnaire terminologique*, supplied by L'Office de la langue française québécois [7], the equivalent for English term IL is "maîtrise de l'information" and "culture de l'information", "culture informationnelle" and "competences informationnelles" are given as its synonyms. Brigitte Juanals, in her book *La culture de l'information: du livre au numérique* (2003) discusses the different French equivalents of IL, finally staying with, given in the title, "culture de l'information". Although she noticed that there is a translation nuance, between the terms "culture" and "information" what is quite important but still not distinguished enough. It can cause the ambiguity in understanding this expression. The theory of Juanals will be presented further, in the section related to information culture.

Also the *Dictionnaire de l'information* (Cacaly, 2008) provides only the term different than "culture de l'information". The term IL can be found there, but at once it refers to the term "culture de l'information". But in fact, a two-and-a-half page definition given there has nothing in common with the IL understood in the way as ALA, UNESCO, or IFLA do it. This definition only enlarges the ambiguity, especially regarding the fact that its author, Michel J. Menou is affiliated at The London City University, in the United Kingdom, where the term IL and not "information culture" is more popular and where its basic definition has been elaborated and popularized for a long time.

Claire Denecker (2003) describes attempts undertaken during the FORMIST conference in 2003 to establish one, national French IL term. However, these attempts ended with none official decision.

As Serres (2008) concludes, the French translation of the term IL has never been easy and there is still a discussion among LIS professionals and scientists. As written earlier, there are few terms existing in French, like: "maîtrise de l'information", "formation des usagers", "méthodologie documentaire", "intelligence informationnelle", "culture informationnelle", or

[7] Available at : http://www.granddictionnaire.com/btml/fra/r_motclef/index1024_1.asp [Retrieved: 31 May 2013].

"culture de l'information" but none of these is equivalent to IL and does not correspond with its actual meaning. Perhaps, that is why the translators of English paper of M.C. Torras i Calvo in the proceedings of the conference organised by ENSSIB (Denecker & Durand-Barthez, 2011) used the term "littératie informationnelle" and explained that they used this "neologism", legitimised by OECD, to not have to choose between "culture" and "competences", or rather to take them both under consideration (Fr. *"nous traduisons l'expression anglaise 'information literacy' par 'littératie informationnelle" reprenant le néologisme de l'OCDE, pour ne pas avoir à choisir entre culture et compétences, ou plutôt pour tenir ensemble les deux"*, p. 39).

Serres conducted even his own bibliometrical research in order to investigate which one of these terms is the most common in French scientific literature. Searching the databases like: Google Scholar, open archives (HAL[8], Tel[9], ArchiveSic[10], and Memsic[11]), base of doctoral thesis in SUDOC catalog[12] and the INIST (L'Institut de l'Information Scientifique et Technique) catalog of journal articles, he found out that the most popular term is "maîtrise de l'information" – the one proposed and promoted by the librarians. The number of publications using the term "culture de l'information" was two times less. The term "culture informationelle" was used even more weakly.

Olivier Le Deuff (2008) in one of his publications was investigating if the concept of culture de l'information is not purely French as only in French and Spanish speaking countries this is the term used as a translation of IL. Probably he did not know that the same problem is discussed also in Poland.

[8] Hyper Aricles en Linge http://hal.archives-ouvertes.fr [Retrieved: 31 May 2013].
[9] Thèses-en-ligne http://tel.archives-ouvertes,fr [Retrieved: 15 May 2013].
[10] Archive Ouverte en Sciences de l'Information et de la Communication http://archivesic.ccsd.cnrs.fr/ [Retrieved: 31 May 2013].
[11] Mémoires en Sciences de l'Information et de la Communication, currently a part of HAL.
[12] Le catalogue du Système Universitaire de Documentation http:// http://www.sudoc.abes.fr [Retrieved: 31 May 2013].

The latest UNESCO publication (Horton, 2013) provides a list of selected French IL resources available in French language. And the French term adopted in this document is “maîtrise de l’information”.

1.4 Information literacy state of the art in Poland and in France

As it could be noticed, in the international literature related to IL, there are several authors who are world-wide known, thanks to the Internet spread and publications in the most popular journals or in Open Access. In the LIS environment the most popular are: Sussie Andretta, Jesus Lau and Sheila Webber. Their publications are recognized all around the world and cited very often and willingly especially by librarians. Differently from the publications of French and Polish authors whose work is less known, because of the language and (in the majority of cases) lack of being published in international journals or monographs. However, they are well recognized in their countries and language zones. To make this research complete, in the review of literature French and Polish authors were also took into consideration and their contribution to the analyzed domain of research were cited. In France the most significant authors in the domain of IL are: Sylvie Chevillotte, Olivier Le Deuff, Brigitte Juanals and Alexandre Serres. In Poland: Hanna Batorowska, Lidia Derfert-Wolf and Ewa Rozkosz. In both countries they are known not only for their theoretical publications, but also for their engagement in librarianship practical work.

The following state of the art reports are limited and describe only the IL undertakings for academic environment, according to the scope and purpose of the current research.

1.4.1 France

In 1982 seven URFIST Centres (Unités régionales de formation à l’information scientifique et technique – Regional Centres for Education in Scientific and Technical Information) were created by the Ministry

of National Education, Research and Technology. Their aim was to promote the information trainings, providing professional education, particularly in new information technologies. Seven URFIST units are very active in the training of professionals (known in the literature also as: "trainings for trainers"). URFISTs are in charge of developing IL in the whole academic environment: among faculty members, advanced students and librarians (Chevillotte & Colnot, 2007; Chevillotte, 2003; Juanals, 2003; Tujague Candalot Dit Casaurang, 2004).

In 1985 the report *France, An 2000* was published (as cited in Serres, 2012) where the authors assumed that the mastery of knowledge and information will be in all probability the crucial factor in next fifteen years. From the perspective of almost twenty years after publication of this report, these words were indeed predicting.

In 1993 the Report *Former et apprendre à s'informer. Pour une culture de l'information* was published (Serieyx, 1993). It was elaborated by the inter-ministerial group which analyzed the existing situation in the domain of information use (Fr. *l'usage de l'information*) and gave the recommendations for the Ministry of Science and Technology and the Ministry of National Education aimed in helping define the actions to be undertaken in the domain of information education in the French education system.

In 1997 the new law was introduced in France [13]. Blin (2008) writes that this "Bayrou Law", named for the then Minister of Higher Eduactaion [the other used name is "The Deug Reform". DEUG - Le diplôme d'études universitaires générales – ZW], marked an important step in the history of information literacy education in France. This reform accelerated the process of

[13] Arrêté du 9 avril 1997 relatif au diplôme d'études universitaires générales, à la licence et à la maîtrise, article 430-3. Available at :
http://www.legifrance.gouv.fr/affichTexte.do;jsessionid=9555F2601028F060210ACDA0C580E5EE.tpdjo07v_3&dateTexte=?cidTexte=JORFTEXT000000748934&categorieLien=cid
and Arrêté du 30 avril 1997 relatif au diplôme d'études universitaires générales sciences et technologies et aux licences et maîtrises du secteur sciences et technologies, available at :
http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000747695&categorieLien=cid
[both retrieved :31 May 2013].

integrating the information trainings (Fr. *formation à l'information*) into curricula. In 1999 the "Bologna Agreement" – the reform of the studies at the European level was introduced in France[14]. This reform helped embed IL courses into the curricula, so they started to be an integrated part of academic education (Chevillotte & Colnot, 2007). Alexandre Serres calls this improvement "LMD effect" - Fr. *l'effet LMD* (Serres, 2006).

Also in 1997 a service FORMIST (FORMation à l'Information Scientifique et Technique – Training in the Use of Scientific and Technical Information)[15] was launched by the ENSSIB (École nationale supérieure des sciences de l'information et des bibliothèques - French National School for LIS). In 1999 an online free accessible FORMIST platform with the pedagogical and scientific resources on information literacy became available. It works on three axes: production and dissemination of educational materials, training of trainers, and information watch (Fr. *la veille documantaire*). As Chevillotte and Colnot (2007) write, many of pedagogical resources are published thanks to the financial and institutional support from the state. FORMIST also contributes into InfoLit Global Directory[16] database, so the resources in French are internationally available and the guidance to information literacy can be useful in other countries. Moreover, since 2000, FORMIST has been organizing the annual conferences, called Rencontres FORMIST (en. *FORMIST Meetings*) to exchange ideas between French and foreign professionals. The proceedings of FORMIST Meetings are published online[17] (Chevillotte, 2003).

In 1999, the publication *Former les étudiants à la maîtrise de l'information. Repères pour l'élaboration d'un programme* was released (Ministère de l'Education Nationale, de la Recherche et de la Technologie, 1999). It was the effect of two-year work of a group discussing on the change of

[14] This reform is also known as *La réforme LMD* (Licence-Master-Doctorat). It introduced three levels of university diplomas.
[15] Available at : http://www.enssib.fr/formist/presentation [Retrieved: 31 May 2013].
[16] Available at : http://infolitglobal.net/directory/en/ [Retrieved: 31 May 2013].
[17] Available at : http://www.enssib.fr/formist/rencontres [Retrieved: 31 May 2013].

documentation training (Fr. *formation documentaire*) politics in higher education, after the introduction of the Bayrou Law. This publication aimed to be a practical guide, helping in elaborating the programme of information and documentation trainings. Two types of information trainings (Fr. *formation à l'information*) for three cycles of studies were proposed: "initiation of information literacy" (Fr. *initiation à la maîtrise de l'information*) for the first cycle students, and "perfecting of information literacy" (Fr. *perfectionnement à la maîtrise de l'information*) for the students of the second and third cycle.

In 1999-2000 the methodology modules (Fr. *unites d'enseignement*) were introduced into the academic curricula and in the most of cases became compulsory. This caused the reinforcement of library trainings and engaged the academic staff into the cooperation with libraries. The complex trainings were organized and held together by the library and teaching staff. This gave also the opportunity to increase the length of the courses (Ministère de l'Education Nationale, de la Recherche et de la Technologie, 1999; Lau, 2008).

In 2004 a group of researchers, teachers and librarians ERTé (Equipe de recherche en technologie éducative - Culture informationnelle et curriculum documentaire) was created to build a whole curriculum in IL from school to university. One of the ERTé partner was the GERiiCO Research Team (Groupe d'Etudes et de Recherche Interdisciplinaire en Information et Communication) of University of Lille 3. In 2008 ERTé organized an international conference « L'Education à la culture informationnelle »[18]. In 2009 the group of doctoral students working in ERTé presented their work during a seminar "Culture informationnelle et curriculum documentaire" [19] (Chevillotte & Colnot, 2007).

[18] Available at : http://ertecolloque.wordpress.com/ [Retrieved: 31 May 2013].
[19] Available at : http://geriico.recherche.univ-lille3.fr/erte_information/?/ [Retrieved: 31 May 2013].

In 2005 the survey on the IL trainings on universities was conducted (Noel & Cazaux, 2005). It showed that after introducing the Bologna Agreement, more and more courses were embedded into the curricula.

In 2010, ENSSIB and URFIST organised a conference on the library instructions for doctoral students (Denecker & Durand-Barthez, 2011). This event set up in the response to the growing number of doctoral students participating in courses offer by French academic libraries (between 2007 and 2009 the number has doubled). The conference's themes were: organisation of work on doctoral thesis, information research, and information literacy.

As Blin concluded (Blin, 2008), from the beginning of the 1980s the actions related to IL were encouraged and supported by the Ministry of Higher Education and Research. The centralization in France helped successfully implement many initiatives, like: URFIST, ENSSIB, FORMIST and facilitated the network collaboration. Since thirty years many has been achieved in IL education in France and the academic libraries are the main actors on this scene. The only weak point, according to Blin, is the fact that in France the research on libraries is quite limited. Blin writes:

> Research on libraries in general and on information literacy in particular is still limited in France. There are several reasons for this. The discipline of "Library Science" does not exist in France as it does in other countries. The nearest equivalent in France is "information and communication science", but in France librarians typically are not trained in this discipline. Instead they receive only a more practical and professional training given in specialized schools. In France, conducting research is not a mission given to professional librarians. Research activities are not considered a major component of their career (p. 42).

Because of the above, also Chevillotte (2005) advocates for launching in the French speaking world the researches on different aspects of IL.

Serres (2008) seems to notice the importance of this fact. He writes about the "porosity of borders" between three groups interested in the IL domain: librarians, educators (Fr. *enseignants-documentalistes*) and scientists. All these groups work on the same subject, but with different approaches. He perceives that the number of French research in IL is very little comparing to the Anglo-Saxon world. It seems quite easy to explain: in France there are no pure LIS studies. Librarianship can be studied in ENSSIB, while information studies – at the university faculties of information and communication studies. The cooperation between these two institutions does not exist in fact, like it is in Anglo-Saxon countries where future librarians and future scientists are educated in the same LIS schools, so regardless of the career chosen after the graduation, they have always the same backgrounds. Serres suggests that the French specialists in SIC (Science de l'Information et de la Communication) should consider to implicate in their field of research also the thematic of user education, which so far has been marginalized. It could be a good opportunity to approach the practical implementation of theories elaborated at SIC university faculties.

As it can observed, in France many activities in the domain of IL have been undertaken so far. However, as Chevillotte (2005) writes, there is still the need of being aware what is going on in foreign countries. She underlines the role of FORMIST which organizes the workshops and conferences to present the works realized not only in France or French speaking countries but also worldwide. And there is still no law in France that would make the IL visible at an institutional or state level (Chevillotte & Colnot, 2007).

1.4.2 Poland

As Derfert-Wolf (2009) writes, in Poland libraries do a lot in the domain of IL. They started to mark the difference between traditional library training and the training of information skills. Librarians realise how important is the cooperation with academics for integrating IL into curricula. But there are still many barriers among which the most crucial one is the fact that

librarians are not perceived by the academics as partners for cooperation. Thus, the cooperation is not common and often it bases on individual, semi-private agreements between the librarian and lecturer.

In Poland, LIS environment started to be interested in IL at the beginning of the 21st century. First, the focus was to explain the term, discuss the foreign literature and initiatives (mostly the Anglo-Saxon ones). There were also attempts to find the Polish equivalent for the English term.
Up to now, several research studies on IL were conducted (see: Batorowska, 2009; Jasiewicz, 2012; E. Kurkowska, 2012; Piotrowska, 2011).

In 2010 Polish librarians from Medical Library of the Jagiellonian University Collegium Medium took part in a project held by the Section for Medicine and Heath of the Norwegian Library Association. The project named "MedLibTrain" and it resulted in edition of the manual *MedLibTrain: become a Belter information competences teacher : a manual not only for medical librarians* (Niedźwiedzka & Hunskår, 2010). This manual is dedicated to librarians who organize library courses. It explains how to ameliorate relations between library and faculties, how to recognize users' information needs and how to conduct trainings and evaluate their effectiveness. The manual bases on Norwegian medical libraries educational models.

And since 2011 the IL PLA Committee started the coordination of works aimed at wide implementation of IL into Polish ground and undertook the initiatives promoting and popularizing IL in all types of libraries. The Committee translates international documents, organizes conferences and workshops, and publishes guides. It also cooperates with Polish and foreign institutions from education and information sector. It facilitates discussion on IL between Polish LIS practitioners and researchers and aspires to integrate IL into curricula at all stages of education.
Up to now, years 2011-2012 have been the most active period for IL in Poland. All undertakings are described in the Polish State-of-the-art Report

elaborated for IFLA purpose (Wiorogórska, 2011). Below, the most important initiatives will be described.

2011

The Institute of Information and Library Science of Jagiellonian University took part in an international project EMPATIC (Empowering Autonomous Learning Through Information Competencies) that aimed at creating a framework for the effective exploitation of the results of the Lifelong Learning Programme (LLP) and related programmes reffering to Information Literacy. There were five partners involved in this project. Poland, as noted above, was represented by the Jagiellonian University Institute of Information and Library Science (Krakow). The other four were: MDR Partners (UK), Istituto di Ricerca sull'Impresa e lo Sviluppo (Italy), Technical University of Crete (Greece), and The Turkish Librarians Association. In May 2011 a one-day workshop on the project was organised in Kraków. It gathered librarians and scientists dealing with a wide-understood information literacy and library education.

In August, the IL PLA Committee published the Polish version of IFLA IL "Guidelines on Information Literacy for Longlife Learning" (Polish title: "Kompetencje informacyjne w procesie uczenia się przez całe życie. Wytyczne").

In September, for the first time in Poland, Training for trainers in IL take place, co-organised by IL PLA Committee and IFLA IL Section. The workshop gathered 30 participants, academic librarians who had opportunity to familiarize with the theme of IL education and its integration into curriculum.

2012

The Modern Poland Foundation published *The Catalogue of media and information competencies* (Fundacja Nowoczesna Polska, 2012), including the list of competencies elaborated for all age group and covering the wide range of themes, such as mastery of information use, ethics and values in communication, the media law, or a language of media communicates. Apart

from this document, none uniform IL standards for any type of libraries in Poland has been elaborated. There was an attempt to systemize information competences for the very narrow target group of medicine students (Niedźwiedzka & Hunskår, 2010) however, this was not an official document.
IL PLA Committee translated into Polish IFLA Media and Information Literacy Recommendations [20], a document that was followed later by the Moscow Declaration on Media and Information Literacy (see section Y.5.1 for details).
In October, the international conference "Media and Information Literacy. Archipelagoes of Knowledge" was organized. It gathered over 120 participants from all types of libraries. The presentations were given both by librarians and researchers. The first conference of its type brought the opportunity for exchange the ideas on IL.

Currently, there is a discussion on introducing the IL standards into Polish LIS environment. Ewa Rozkosz (2010) postulates the review of foreign patterns that were internationally approved and an attempt to adjust and introduce one of them into Polish field. In her opinion, while waiting for national standards, Polish libraries have nothing to lose in adaptation the foreign ones. At least this can help in breaking the stereotypes about boring library trainings.

The Rozkosz's opinion seems adequate and currently the Polish Librarians Association is working on adjusting the foreign standards to Polish needs.

Hanna Batorowska (2009) states that in Poland, the term IL is related too often only to the basic information searching skills or to the trainings of these skills while in the world literature, particularly in Anglo-Saxon one, IL obtained long time ago the rank of a scientific discipline, derived from documentation and information sciences.

[20] Original document available at http://www.ifla.org/publications/ifla-media-and-information-literacy-recommendations . Polish translation available at : http://www.sbp.pl/repository/SBP/sekcje_komisje/komisja_ds_edukacji_informacyjnej/Rekomendacje_IFLA.pdf [Both retrieved: 16 Feb. 2013].

Batorowska is right; however the situation in Poland will probably not change much in few years. For the moment, there are still not enough LIS researchers specialised in IL, not enough scientific projects, and not enough IL research to postulate for giving the IL the notion of a separate discipline.

1.5 National and international institutions and organizations involved in information literacy work

The IL concept and term were widely accepted in 1990s first of all in the USA, Australia, South Africa and in Europe, especially in Scandinavia. Till nowadays IL is present on international conferences and in the works of worldwide organizations (Kurkowska, 2008).

The IL models and standards are created and implemented mainly by the organizations related to LIS, very often in cooperation with the education sector. The most known countries which elaborated their national standards are: the USA, Australia, New Zealand and the UK. In the USA this task was coordinated by American Association of School Libraries (AASL) and American Council of Research Libraries (ACRL). In Australia and New Zealand – by the Australian and New Zealand Institute for Information Literacy (ANZIIL). In the UK – by the Society of College, National and University Libraries (SCONUL) and Chartered Institute of Library and Information Professionals (CILIP), formerly known as the Library Association Andretta 2005; Derfert-Wolf, 2009a). These standards will be discussed in details further.

In Poland, still all undertakings related to IL are grassroots initiatives and they are not legitimated. This situation inhibits a faster development of Polish IL standards. There is still no definition or unified terminology. Moreover, none standards are not nationally accepted for any of educational level. However, there are active librarians who propose the drafts of IL guidelines and even apply them in their libraries. As it was already mentioned, at the beginning of 2011 the IL Committee was established within the structure of Polish Librarians Association. It is a milestone in the

Polish IL undertakings, the first step to legitimize and officially introduce IL in Poland.

In France, the "Bayrou Law" noted earlier in Section 1.4.1 helped to embedded IL into academic curricula and the Bologna Agreement emphasised the embedding (Chevillotte & Colnot, 2007). And although there are no French, uniform IL standards, the state gives an important financial support, mostly for publishing pedagogical resources related to IL.

And, as Joint and Wallis (2005) wrote: "the simple fact remains that in national educational policy-making, if an educational activity is not institutionalized, it probably doesn't matter very much. In fact, it effectively ceases to exist" (p. 215).

1.5.1 UNESCO undertakings in the domain of information literacy

In 2003 UNESCO formulated its definition of IL in the so-called "The Prague Declaration" known as "Towards an Information Literate Society" (see Appendix 4). This declaration was the result of the Information Literacy Meeting of Experts, organized by the US National Commission on Library and Information Science and the National Forum on Information Literacy, with the support of the UNESCO. The document was signed by the representatives of 23 countries. The concept of IL presented here is very general and says that:

> Information Literacy encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of life long learning. Information Literacy, in conjunction with access to essential information and effective use of information and communication technologies, plays a leading role in reducing the inequities within and among countries and peoples, and in promoting tolerance and mutual

> understanding through information use in multicultural and multilingual contexts[21].

At the beginning of 2006, together with IFLA and National Forum on Information Literacy, UNESCO adopted the document titled "Beacons of the Information Society: The Alexandria Proclamation on Information Literacy and Lifelong Learning" (see Appendix 2). It was the result of the works during the High Level Colloquium on Information Literacy held at the Bibliotheca Alexandrina in November 2005. We can read there:

> Information Literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations[22].

According to The Alexandria Proclamation, IL skills are necessary for people to be effective lifelong learners and to contribute in knowledge societies. This is why IL was endorsed by UNESCO's Information for All Programme (IFAP) as a basic human right (Catts & Lau, 2008).

Serres (2008) underlines the importance of UNESCO undertakings. According to him, all documents and projects elaborated by UNESCO in this domain caused that IL became a new "fundamental law", the necessary condition for employability, the political and social issue of fight against the digital divide.

At the end of 2006 the InfoLit Global[23] repository was opened. The project was financed by UNESCO and realized by IFLA Information Literacy Section. The aim of the InfoLit Global is monitoring of IL development on all continents, the promotion of documents and tools which can support institutions and organizations while creating the own IL education

[21] Available at: http://portal.unesco.org/ci/fr/files/19636/11228863531PragueDeclaration.pdf/PragueDeclaration.pdf [Retrieved: 15 May 2013] and in Appendix 4.
[22] Available at: http://portal.unesco.org/ci/en/files/20891/11364818989Beacons_of_the_Information_Society___The_Alexandria_Proclamation_on_Information_Literacy_and_Lifelong_Learning.doc/Beacons%2Bof%2Bthe%2BInformation%2BSociety_%2B%2BThe%2BAlexandria%2BProclamation%2Bon%2BInformation%2BLiteracy%2Band%2BLifelong%2BLearning.doc [Retrieved: 15 May 2013] and in Appendix 3.
[23] Available at : http://www.infolitglobal.net/directory/en/ [Retrieved: 31 May 2013].

programmes and presenting the international educational resources. Each country participating in the project has its own regional coordinator, responsible for updating the base. Both France and Poland are the members of the InfoLit Global. The general coordinator of this project is Jesus Lau from Veracruzana University, Mexico. The coordinators for French-speaking countries are Sylvie Chevillote and Mireille Lamouroux from France. Polish coordinator is Ewa Rozkosz[24].

In 2007 UNESCO published a book *Understanding Information Literacy: A Primer* (Horton & Jr, 2007). The author underlined two important issues without which the IL concept could not be successfully realized: trainings for trainers and the need of IL advocacy. Horton emphasized the need for programmes for educators to help them understand the importance of IL. However, nothing could be done without any strategy that is why he proposes the creation of a National IL and Lifelong Learning Strategy and Vision for every country. He argues also for the strengthening of information institutions such as libraries.

In 2008 the book *Towards Information Literacy Indicators* was edited (Catts & Lau, 2008). This UNESCO's contribution into development of IL will be discussed later in Chapter 4 (section 4.7.1).

In June 2012 the Moscow Declaration on Media and Information Literacy [25] has been proclaimed. This opened a new chapter in work and research on media literacy. In this document media literacy was for the first time connected with IL. The Moscow Declaration recalls the statements of The Prague Declaration and The Alexandria Proclamation, but first of all it calls on free and effective use of information and breaking the legal limitations such as censorship, limited information in the public domain; it also proposes to recognize media and information competencies as a basis of individuals' and all society's development and to integrate these competencies into

[24] State on February 2011.
[25] Available at : http://www.ifla.org/publications/moscow-declaration-on-media-and-information-literacy [Retrieved: 31 May 2013] and in Appendix 5.

curricula at all levels of education and lifelong learning as well as to integrate them into all national, educational, cultural, information, media and other policies.

In 2013 UNESCO published *Overview of Information Literacy Resources Worldwide* (Horton, 2013). This document provides a collection of references of different resources related to IL in 42 languages. This UNESCO publication presents a multilingual and global approach and proves that IL is a worldwide issue nowadays. The document provides also a IL logo with IL term translated into 46 languages (see Figure 5).

Figure 5. IL logo with terms in 46 languages

1.5.2 Legitimization of information literacy

In 1990 IFLA Information Technology Section asked the new Working Group on User Education to investigate the matter. IFLA Professional Board granted the permission to start a Working Group on User Education. The purpose was to find out whether in the IFLA community there would be

enough interest to pursue programmes related to user education questions. The IFLA Professional Board confirmed the status of the Working Group as a Round Table [now this kind of initiative is called in IFLA nomenclature SIG – Special Interest Group – ZW] in November 1993 (Kokkonen, Koskiala, Oker-Blom, & Tolonen, 2004). In 2002 the Round Table received the status of the Information Literacy Section (number 42), working till now under Division of Library Services. As it can be read at the Section web page, the primary purpose of the Information Literacy Section is to foster international cooperation in the development of IL education in all types of libraries and information institutions [26]. IL was one of the main themes on the seventieth IFLA World Congress in 2004.

In 2007 IFLA in conjunction with UNESCO published a report on the international state of the art in IL. This report presented both the interest in IL around the world and the different stages of development in various countries. It provided a useful summary of the state of IL policy and practice.

IFLA has a role in supporting the creation of standards against which librarians and libraries can evaluate all forms of IL, in supporting and valuing all forms of information literacy, and in continuing to provide various forums in which all interested parties can share their successes in defining information literacy in their own environments. So far, IFLA included IL statements in many of its policy documents, for example The IFLA Internet Manifesto, The IFLA/UNESCO School Library Manifesto, and The UNESCO Public Library Manifesto (Campbell, 2004).

In 1989 in the USA the National Forum on Information Literacy (NFIL) was established. In Europe, in 2003 - The European Network for Information Literacy (EnIL). In Australia and New Zealand it is Australian and New Zealand Institute for Information Literacy (ANZIIL) which supports IL initiatives (Derfert-Wolf, 2009).

[26] Available at : http://www.ifla.org/en/about-information-literacy [Retrieved: 31 May 2013].

Since 1992 the term IL has been marked in the thesaurus of ERIC (Education Resource Information Center) database.

Catts and Lau (2008) who proposed the IL indicators, conclude:

> The goal of IL for all involves complexity and challenges for policy makers. Hence, establishing indicators of IL requires careful planning, clarification of goals, and cooperation among nations (p.10).

Since 2007 two international peer-reviewed journals entirely dedicated to IL have been editing – "Communications in Information Literacy" [27] and "Journal of Information Literacy" [28]. Both are edited online, in accordance with Open Access principles.

In 2008 IFLA organized a competition for international IL logo. The project of Edgar Luy Pérez from Cuba won. The visualization of the concept consists of two elements: an open book and a circle (see Fig. 6). The first one symbolize access to information; the second one – the acquired knowledge. This graphical metaphor represents individuals who are fluent in use of information retrieval tools and at the same time they want to share and promote their skills. In 2009 IFLA published *Integrating the Information Literacy Logo. A Marketing Manual* (Lau & Cortes, 2009) to help libraries and other institutions promote IL logo. The manual was translated into French. The extended summary in Polish was included at the end of Polish version of IFLA *Guidelines* (Lau, 2011).

Figure 6. IL logo in Polish and French versions

Source: Infolit Global (http://www.infolitglobal.info).

[27] Available at : http://www.comminfolit.org [Retrieved: 31 May 2013].
[28] Available at : http://ojs.lboro.ac.uk [Retrieved: 31 May 2013].

1.6 Information literacy and information culture

The term IL is actually used only in publications from the domain of LIS. Thus, as Kurkowska (2008) wrote, it has the territorial application, but only among one community – the librarians and information professionals.

Kurkowska is right - IL is a LIS concept. But it is difficult to accept the fact that the one and only English term, i.e. "information literacy" is translated into French and Polish sometimes literally or as "information culture".

On the base of readings on IL in English, French and Polish, a certain observation can be formulated. In English, the term "information culture" in the context related to IL does not exist at all. No even one article that would discuss this term has been found while preparing this review of literature. However, in French and Polish such term exists and has a form respectively *culture informationnelle* (Fr.) and *kultura informacyjna* (Pl.). It should be noted that this term can be found exclusively in works of authors not involved in the practical LIS. They are scientists, working in LIS domain, which is understood differently in France and Poland, but they are not professional librarians and their work does not have the practical, but solely theoretical approach.

For example, in French literature Alexandre Serres (Serres, 2008, 2009, 2012) or Brigitte Juanals (2003), the scientists working at universities, use the term "information culture" (Fr. *culture informationnelle*) as one of possible translations of the term IL, while Sylvie Chevillotte (2005; 2007), a librarian, always translates this term in her publications as *maîtrise de l'information*.

In Polish literature Waldemar Furmanek (2002) used the term "information culture" for the first time. According to him, information culture and IT culture (Pl. *kultura informatyczna*) have the same roots – both terms come from "technical culture" (Pl. *kultura techniczna*) and "work culture" (Pl. *kultura pracy*). Furmanek defines information culture as a system of human's attitudes towards the role of information and information technologies in

the contemporary development (p. 63) and for him term has nothing in common with IL.

Unlike Hanna Batorowska, who in her book *Kultura informacyjna w perspektywie zmian w edukacji* [En. *Information culture in the light of changes in education*] (2009), defines information culture as the sphere of activities, accompanying human since early childhood, as only he/she starts to realize that information exists and can be purposely used. As the author writes, the purpose of her book has been to discuss the information culture in the educational environment and to present the complexity of the term "information culture". Unfortunately, she confuses the terms IL and "information culture", using both as synonyms and implicating the terminological ambiguity. It is the most visible especially when Batorowska refers to works of Carla Basili, the professor of National Research Council in Italy, who also investigates the issues related to information culture and information literacy. While translating and recalling her theories, Batorowska confuses the terms and in the result, the reader has the impression than information culture and information literacy are terms of the same meaning. In addition, in some parts of the book she uses these two terms as equivalents, but in another as the contextual or related expressions. Using the terms as synonyms in the same monograph is a mistake and causes ambiguity. Batorowska has based a major part of IL issues in her book on the Carla Basili's works. Basili in papers published in English always uses the term IL, while publishing in Italian, her native language, she translates IL as *cultura dell'informazione*, but as Le Deuff (2008) noticed, Basili uses it to describe the term broader than just IL. Maybe that is why, while translating her article into French, Basili uses the term "culture de l'information", too (Basili, 2004). However, in her Engish publication (Basili, 2006), she explained that IL is a subject of study called "culture of information". What means clearly that she regards IL only as a branch, and not a synonym of the terms "information culture" or "culture of information". Batorowska seems did not capture this nuance. Unfortunately, she repeats this

misunderstanding in her later work as well (Batorowska, 2011). And Le Deuff posits that information culture is based on a political and civic culture, a critical analysis juxtaposing various "literacies" and education - media education, image education, etc. So he postulates for considering information culture as an international concept strictly related to IL and transliteracy. This type of approach is familiar to Marlène Loicq as well. She posits that *culture informationnelle* is holistic, dynamic and ubiquitous (Loicq, 2009, p. 82).

Maria Próchnicka (2007) classifies definitions of IL into two categories. According to her, in the narrow meaning the term IL is described as library skills, but expanded with new qualifications necessary for effective information retrieval in the Internet era. Thus, we have the instrumental aspect (searching and use of information) and the intellectual one – related to analysis, selection, evaluation and synthesis of information. By Próchnicka the broad meaning of IL it is the integrated set of knowledge and skills. This definition was shaped by a nowadays informational and technological reality where the access to information and the easiness of information use has an important impact on the possibility of playing various roles in different spheres of social life, related to professional work, education, culture, business, and entertainment. The expansion of new information and communication technologies (ICT) has significantly changed the process of social creation, preservation, transmission, access and use of information. It has removed the division between the information producers and consumers, between the information systems creators and users, between those who own information and those who use it. However, the second definition proposed by Próchnicka is not a definition of IL itself, but it is rather related to information culture: the term much more general, describing the process of changes and having not much in common with the library users' trainings. As Próchnicka is an academic researcher not a librarian, this strengthen the observation that in the Polish literature on IL the terms "information literacy" and "information culture" are frequently misused, treated as synonyms in the cases where they do not mean the same.

Also the ERTé Research Group has in its name the term *culture informationnelle* (En. information culture), although all their works are related to the subject which ENSSIB defines as m*aîtrise de l'information*. The ERTé consists mainly of researchers, working in the academic research teams, in minority from the practicing librarians. Here, the background is the same – researchers use the term "information culture" in the case where librarians would say "information literacy".

For Olivier Le Deuff, one of the former ERTé members, information culture can be both the possible translation of the term IL and its more ambitious vision (Le Deuff, 2009). However, in his article from 2010 (Le Deuff, 2010), he concludes that "culture de l'information" is not a new term, but it dates back to 1997 or even, if searching deeper, to 1930s. That is why English term "information literacy" that came to France much later, should not be translated as "culture de l'information". Because giving the new concept to the old term is not a good procedure in this case.

It is a good moment to recall the theory of Juanals. She proposes three different definitions, which she describes as three progressive levels of competencies in the frame of wide "information culture" term. These are: 1. mastery in access to information (Fr. *la maîtrise de l'accès à l'information*) which involves the training in digital information on the technical and methodological aspects: technical access to computerized devices, evaluation, sorting, effective and critical use of information; 2. culture of access to information (Fr. *la culture de l'accès à l'information*) which beyond the technical and documentary skills, involves the autonomous, critical and creative use of information; 3. information literacy (Fr. *la culture de l'information* or *la culture informationnelle*) - the range of competence which assumes a level of general culture, a media knowledge, considering ethics and social integration. This widely exceeds the documentary and computer competences.

Alexandre Serres proposes an explanation that is closest to the general observations presented in the present study, referring to the scope of the term "information culture". He suggests that there are two approaches of this term. The first one is educational: information culture which means a set of skills and information competencies necessary to have the intellectual and practical proficiency in information retrieval. In this sense the term "information culture" can be a translation of English "information literacy" and can refer to user education at academic and high-school level. The second approach is the sociological one. The culture is understood here in the anthropological and sociological sense as a set of information practices, use and representations more or less spontaneous. In this perspective, information culture is a branch of functional sociology (Fr. *sociologie des usages*).

As noted earlier, the term "information culture" in fact does not exist in English literature referring to IL concept. However, Lloyd in her works (2006, 2012) provides a double way of perceiving and analyzing IL. The first one is an educational landscape, i.e. skills that enable the discovery of information; and the second one is a socio-cultural practice, "influenced by social and embodied practices and processes, and characterized by specific requirements of learning at and to work" (Lloyd, 2006, p. 578), thus far from information skills approach. The second Lloyd's definition seems to be quite similar to the Serres' one and this is information culture, even thought – what must be underlined – the term itself is not explicitly used.

Basili (2006) does not go so far in categorizing the information culture, however, she also noticed that this concept is multidisciplinary which "inherits methodologies and tools from bibliography, library science, documentation, scientific research methodologies and computer science" (p. 5).

Hence, all publications cited above can help explain why the scientists prefer using the term "information culture" and librarians – IL. It depends on the approach and the vision of the concept. Thus, the question can be posed: if

there is a distinction between these two terms, why are they so often confused and treated as synonyms in French and Polish literature? And maybe in others, too, but it was not investigated as not being a main purpose of this research. In opinions of some cited earlier authors, the problem lies first of all in the fact that there is no national, uniformed vocabulary related to IL. And second, in the problem related to the education curricula. In France and Poland LIS researchers working in academic institutions often do not identify themselves with the library community. Hence, the most often they conduct theoretical research, while librarians are focused on practice. These two approaches seem be impossible to juxtapose - according to observations and the study of literature, in both countries there are few examples of this kind of cooperation. For librarians, IL is an educational project strictly related to users' needs and they call it "alfabetyzacja informacyjna" or "maîtrise de l'information". While for scientists the IL is a scientific problem, so for the purpose of their reflections they prefer to use more sophisticated terms as "kultura informacyjna" or "culture informationnelle". Contrary to the Anglo-Saxon world, where LIS specialists cooperate closely, no matter if they are librarians or researchers and both groups use the same, legitimized term – "information literacy".

In French literature some attempts of deeper explanation of relation between these two terms can be found. Sylvie Chevillotte (2007) tries to associate these two terms, by suggesting that terms "culture de l'information" or "culture informationnelle" encompass several notions and could be described as the "umbrella" concept because information culture needs instrumental knowledge, but also methodological, economic, legal, and ethical one. According to Chevilliotte, information culture acquisition means knowing the media, computing, information retrieval, but also the acquisition of many other skills (p. 18). And, as it was posited earlier by few authors, also Chevillotte states that information culture is the broader term, encompassing the fields of sociology, politics, culture and philosophy. While

IL encompasses the mastery of computing, use of library, media, networks and Internet.

Also Chapron and Delamotte (2009) posit that the French literal translation of IL is *maîtrise de l'information* not *culture de l'information*, as this second term has more general approach, it is broader, more theoretical, concerning all society. This is the perception of information in and by the society. However, the authors underline that these two concepts are not in conflict, but they are completing each other as IL is one of the part of the information culture. IL is related to practice, it is an education of information. For Chapron and Delamotte the reason why there are so much ambiguity in this domain is that one, solid definition of culture information does not exist. Le Deuff (2007, 2010) introduces the term 'la culture de l'information orientée «bibliothèque»' (en. *information culture library oriented*). He posits that this concept is in line with the library instruction and information literacy, which in French he names in this case *maîtrise de l'information* and not *la culture de l'information*.

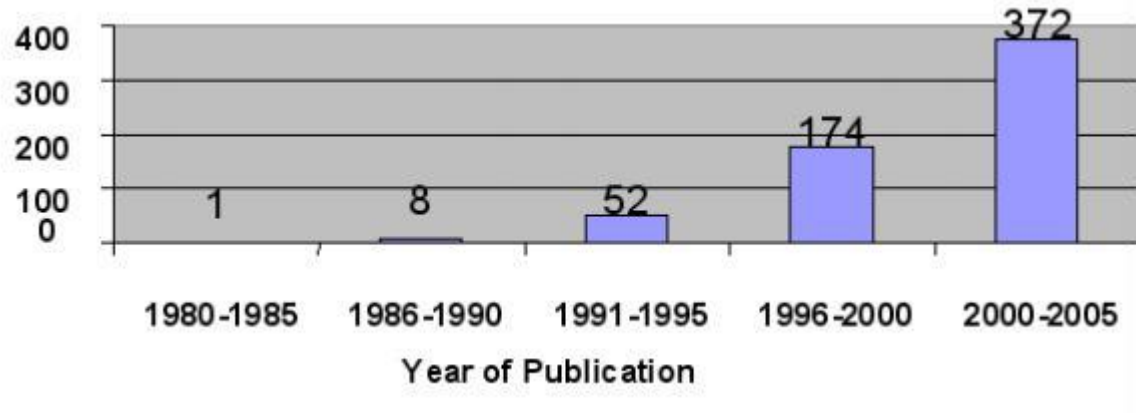
1.7 Conclusions

This chapter can be summarized by describing the results of a bibliometric study of IL publications conducted in 2007 and presented in the article of Nazim and Ahmad (2007). This study covered 607 citations in 158 scientific journals in years 1980-2005. The documents included in the study were identified via LISA[29]. The term "Information Literacy" was searched. As it could be expected, English was found the most favourite language of authors in the subject, however generally the studied literature on IL was published in 18 languages. French was on the fifth position, after Chinese, German, and Japanese. The majority of articles was published in the USA, followed by UK and Germany, Australia, Canada and Japan. The French speaking countries were on the fifth (Canada), ninth (France), and eleventh (Belgium) position.

[29] Library Information Science Abstracts (LISA) is a is an international abstracting and indexing tool designed for library professionals and other information specialists, supplied by ProQuest-CSA Social Sciences. LISA currently (May 2013) abstracts over 440 periodicals from more than 68 countries and in more than 20 different languages.

The total number of IL articles on IL published in French journals was five. Poland was not mentioned at all, although three Polish LIS journals are abstracted in LISA[30]. The evolution of number of publications is shown on the diagram (Fig. 7).

Figure 7. Temporal evolution of number of IL publications



Source: (Nazim & Ahmad, 2007, p. 56).

This shows how much is still to do in the field of IL both in France and Poland. To give the international resonance and importance to the initiatives related to IL, French and Polish authors must be more recognizable. During five years since the publication of Nazir and Ahmad's study certainly much has changed for better in the domain – the proof that majority of French and Polish publication cited and discussed in this study come from 2005 and later. Although it is still not enough. So far, the number of European IL literature cannot be compared to this coming from North America. European authors even if they contribute a lot, are still unknown globally but mostly locally, because they do not publish in wide-known LIS resources and prefer to publish in their national languages. The exception here was Carla Basili, who was publishing a lot at the beginning of the 2000s. when the ENCIL project was launched and British authors. Also many European IFLA IL Section members publish their works, but the most often they are doing that under the aegis of IFLA and not their own affiliation.

[30] These are: Biuletyn EBIB, Przegląd Biblioteczny, and archival issues of Zagadnienia Informacji Naukowej.

Johnson and Jent in already mentioned annual bibliography of IL publications in English (Johnson & Jent, 2004), presented the statistical data and gave the numbers of publications related to IL in all types of libraries. From the point of view of this research, the academic libraries are most important. In 2002 and 2003 there were respectively 151 and 148 publications from Australia, Canada, New Zealand, the UK, and the USA. And it was almost a decade ago, whereas in Poland or in France after several years the number of publications related to IL is still quite low. Although, deep bibliometric studies have not been conducted yet, the review of the literature prepared for this research revealed this state of the art.

Chapter 2. The use of scientific journals among doctoral students at the University of Warsaw and the Universities of Lille

This chapter is dedicated to the design and analysis of the comparative study conducted among the doctoral students at the University of Warsaw and the University of Lille 3. The methodology of research, its design and detailed analysis will be presented here. In the first part of the chapter the results of the study at the University of Warsaw are discussed, the second part focuses on the data obtained from the study conducted at the University of Lille, and in the third part the comparative analysis of both studies results is presented.

2.1 Purpose of the research and hypothesis

According to Powell (2003):

> User studies have been conducted for a number of purposes and have realized a variety of benefits. In general, they have been used to provide data for evaluations of libraries and other information agencies and to facilitate planning for collection development, programmes and services. (p. 649)
>
> User studies can provide information about the populations using libraries, user awareness of services, levels of and reasons for user satisfaction, unmet needs, types of information used, reasons why individuals use particular resources, and even help to predict library/information usage. (p. 650)

The purpose of this research is to determine the extent and factors affecting the use of scientific journals among the doctoral students at the University of Warsaw and the University of Lille.

Observations made by the author dating back to the time of her studies, but first of all those made during almost six years of work in the Serials Department of University of Warsaw Library, found that the use of scientific serials among students is low despite their high value as the medium of knowledge transfer. A direct correlation between financial resources spent on subscription of serials (extremely high, especially for foreign electronic databases) and serials use statistics cannot be observed. Academic libraries offer students access to the continuing resources for all fields of knowledge and research (or at least for those represented at the particular university) but in spite of this students still do not see the need for regular reading of serials. Parenthetically, not only students. In the research conducted by Anna Mierzecka-Szczepańska (2012) one-third of respondents declared that they have never used the online databases of scientific journals accessible at the University of Warsaw.

Comparative study of the problem at the two universities - French and Polish – was conducted in order to observe the differences in the use of scientific journals by the doctoral students as well as estimate the influence of the local organizational culture of academic libraries on the development of users' information skills.

The wish was to get responses to the following questions:

Why do students so rarely use scientific journals (in print or electronic version)?

Is it ignorance of specialist bibliographies and bibliographic databases or ignorance of foreign languages or lack of searching skills for electronic resources and libraries' holdings?

What kind of activities on the librarians' and lecturers' part would induce the students to read the scientific serials more often, and - above all – bring the unquestionable scientific value of serials to students' attention?

2.2 Research population

The whole target population consisted of 3,789 doctoral students – 1,771 from the University of Warsaw and 2,018 from the Universities of Lille. The response rate for whole population was 15,30% (578 respondents). In the case of Poland the response rate was 14,70% (261 respondents) and in the case of France it was 15,70% (317 respondents).

The research sample and data gathering are described in details in this chapter.

2.2.1 University of Warsaw

The target population was 1,771 doctoral students in 19 faculties, representing 4 fields of research: Humanities, Social Sciences, Pure Sciences and Applied Sciences at the University of Warsaw[31]. The link to an online survey was sent directly to them. The doctoral students were chosen because advanced and extensive research is a necessary task for them and they might be perceived as conscious users of print and electronic holdings offered by the university libraries. An official request was made to the professors responsible for doctoral studies at each faculty to get e-mail addresses or (in a case of doubts connected with personal data protection) to distribute centrally at the faculty the letter with a link to the online survey. In that case faculty administration was asked to give the exact number of students to whom the letter would be sent.

2.2.2 Universities of Lille

The target population was 2018 doctoral students from five doctoral schools (fr. *Ecole Doctorale)* faculties, representing 4 fields of research: Humanities, Social Sciences, Pure Sciences and Applied Sciences at the University of Lille 1, University of Lille 2, and University of Lille 3[32]. Identically to the Polish part of the study, the link to an online survey was sent directly to them. The reasons of choosing doctoral students were the same; besides the similar

[31] The detailed list of University of Warsaw faculties is given in Appendix 6.

[32] The detailed information about each doctoral school is presented in the Appendix 7.

target group was necessary to keep the comparison between Poland and France. Likewise, an official request was made to the professors responsible for doctoral schools at each university in order to distribute the link to the survey centrally within the school, or the letter with a link to an online survey. Also, in that case faculty administration was asked to give the exact number of students to whom the letter would be sent.

2.3 Research sample

At the very beginning of data analysis work, the problem of the lack of answers for certain questions (widely described in the literature) was faced. As Babbie (2008, p. 180-182) wrote, in virtually every survey, some respondents fail to answer some questions (or choose a "don't know" response. In his book, Babbie put forward three methods how to solve this problem. Two of them were adapted to this survey. The first one says that in case of lack of some answers these responses can be excluded from the analysis if the general number of analyzing cases will be enough and the excluding will not influence on the representativeness of sample. The second method says that in some cases the lack of data can be treated as one of possible answer categories. This method can be applied in the case if the respondents were asked to choose the "Yes" or "No" answer. If the respondents choose many times "Yes" in former question and leave the next question without answer, this lack of answer can be treated as "No". During the data analysis of this survey these two methods described by Babbie were applied in the cases where it was sure that this would be the right choice.

However, it must be said that in this study it is not the percentage of the total population that counts, but rather the accuracy of the data. Besides, as Powell (2003) writes: "the bulk of user studies continues to take the form of surveys and is usually designed to collect data from a sample rather than from of an entire population" (p. 649).

Also in Polish literature, Pilch and Bauman (2001) noted:

> Contrary to widespread belief, the size of population does not have a significant influence on a necessary size of sample. (...) The statistical methods of data analysis refer to the assumption that the population where the studied sample comes from consists of an infinitive number of individuals. (...) Approximately it can be stated that the sample of less than 30 individuals is small. The sample of not less than 100 individuals is large. A sample should be large enough to have an average at least 10 individuals in a cross-section (p. 129-130).

Thus, it can be stated that the questionnaire was filled by the students interested in the topic and willing to share their experience. The detailed number of respondents and their fields of studies are presented in Table 1.

2.3.1 University of Warsaw

The attempt was to ensure a sample that would be representative for all research disciplines at the University of Warsaw. However, due to the fact that the survey was not compulsory and it was an online anonymous questionnaire, neither the high frequency of answers nor the 100% of fulfilling the whole survey could not be ensured (there were questionnaires where certain questions were skipped). There were 266 responds, including 5 questionnaires which were opened, but not filled in at all. In total it gives 261 questionnaires fully filled in. It is 14,73% of doctoral students population at the University of Warsaw.

There were four fields of research represented by respondents: 109 (41,76%) students in Pure Sciences, 81 (31,03%) in Humanities, 59 (22,61%) in Social Sciences and 5 (1,92%) in Applied Sciences.

Table 2.1 - The University of Warsaw doctoral students by field of research

Field of research	**Female**	**Male**	**Total**
Humanities	58	23	81
Social Sciences	32	27	59
Pure Sciences	51	58	109
Applied Sciences	3	2	5
Respondents who skipped this question			7
TOTAL	144	110	261

As it was mentioned earlier, there are 20 faculties at the University of Warsaw. Students responding to this survey were asked to indicate not their faculty, but the field of their study. Hence, it is probable that during this self-description they indicated wider field (i.e. Humanities or Pure Sciences) and it resulted in the fact of comparatively smaller number of representatives of Social and Applied Sciences.

2.3.2 Universities of Lille

Also in the case of this study, the attempt was to ensure a sample that would be representative of all disciplines of researches conducted at the Universities of Lille. Similarly as at the University of Warsaw, the survey at the Universities of Lille was not compulsory and it was an online anonymous questionnaire, so the high frequency of answers nor the 100% of fulfilling the whole survey could not be ensured (there were questionnaires where certain questions were skipped). There were 317 responds, however there were many questionnaires not filled in 100%. The rate of skipped question was very high among French students. 317 respondents give 15,70% of doctoral students population at the Universities of Lille.

There were four fields of research represented by respondents: 121 (38,17%) students in Social Sciences, 99 (31,23%) in Pure Sciences, 58 (18,30%) in Humanities and 15 (4,73%) in Applied Sciences.

Table 2.2. - The University of Lille doctoral students by field of research

Field of research	**Female**	**Male**	**Total**
Humanities	36	22	58
Social Sciences	75	46	121
Pure Sciences	47	52	99
Applied Sciences	6	9	15
Respondents who skipped this question	24		24
Total			317

2.4 Research design

2.4.1 Survey

The survey was selected as the most appropriate approach to get a large sample. The survey method relies on a questionnaire instrument and is the most common method used in social science research. According to Feather & Struges (Feather, 2003), in library and information science,

> the bulk of user studies continues to take the form of surveys and is usually designed to collect data from a sample rather than from an entire population. The questionnaire, interview and observation remain common data-collection techniques for surveys. [...] User studies can provide information about the populations using libraries, user awareness of services, levels of and reasons for user satisfaction and dissatisfaction, unmet needs, types of information used, reasons why individuals use particular

resources, and even help to predict library/information usage (p. 649-650).

The survey questionnaire[33] was adapted and elaborated on the base of two already existing enquiries: a 39-question survey successfully used in the doctoral study of Al-Saleh (Al-Saleh, 2004) and a 28-question enquiry suggested by the Common Documentation Services of University of Lille 3 (Université Lille 3, 2009). It should be mentioned that this enquiry is used each year for the first-year doctoral students. These two questionnaires were modified to the needs of actual research. Modification was a result of the author's observations made during seven years of work in the University of Warsaw Library. The final instrument used in the research contained 27 questions and was divided into 2 parts described below.

Part 1 of the survey, 21 detailed questions about the use of library and information holdings of University of Warsaw and Universities of Lille inquired if doctoral students are familiar with the libraries electronic and traditional catalogues, union catalogues (NUKAT - Polish National Union Catalog or SUDOC - Système Universitaire de Documentation), and printed and electronic journals collections. The questions concerned the library instruction as well as the potential obstacles while using scientific journals that the libraries provide.

Part 2 of the survey, 6 demographic questions, were designed to get the basic characteristics of respondents, including: gender, year of studies, field of research, English and other languages proficiency.

In spite of dividing the questionnaire into two parts and arranging the question in a consequent sequence, the survey aimed not to be too tight. The author followed Babbie's suggestion (Babbie, 2008), which underlines the need of free ordering items in questionnaire that significantly facilitates the data analysis work afterwards (p. 281-282).

[33] The English, French and Polish versions of questionnaire are provided in Appendix 8.

2.4.2 Observations

As Hargittai and Hinnant state “For an in-depth understanding of people’s information-seeking behaviour, in-person observations (...) can be especially insightful. Such studies are not uncommon in the LIS literature” (Hargittai & Hinnant, 2006, p. 63).

Hargittai and Hinnant consider observation as a new method of data collection that helps researchers gain access to population under study.

However, observation is a classic method in the social research, having as a main objective the behaviour that is observable and situated in the presence. This is a one-way, directed method. Observation can be: systematic or occasional, structured or non-structured, participant or non-participant, overt or covert. Observation is an element of experimental research and the part of an exploratory phase of research that aims at clearing the hypothesis (Babbie, 2008).

In the case of this research a covert participant observations were applied. It means that observer did not declare her presence and intentions to not distort the behaviour of observed population. This was also caused by the fact that certain situation can be observed in secret only to make a research credible (De Ketele & Roegiers, 2009).

2.4.3 Grounded theory

2.4.3.1 Definition and basic procedures

The term grounded theory (GT) was used for the first time by Barney Glaser and Anselm L. Strauss in their book “The discovery of grounded theory. Strategies for qualitative research” (1967). GT is a quantitative research method that aims at developing theory from data systematically obtained from an empirical social research and not at the stage of literature review and definition of hypothesis.

In French language there are four terms that can be found in the literature: “théorie ancrée”, “la grounded theory”, “théorie enracinée”, and “théorie fondée”. In Polish literature there is one - “teoria ugruntowana”.

GT is one of interpretive methodology – a research is conducted from an experience-near perspective and researcher does not start with hypothesis determined a priori, but rather wants to emerge data from the field. Besides, GT is quite flexible: there are no strict research principles. Perhaps that is why GT is not frequently applied as it might seem unclear and unspecified.

This approach might also seem difficult for novices, but on the other hand it can be particularly interesting for practitioners who are familiar with the analysed problems by experience and, by choosing different research techniques, can conduct research with use of GT and then collate the elaborated theory with the deepened literature review.

However, GT risks at bias creating. GT is a good method for practitioners, but their experience and field knowledge might influence on data interpretation as they frequently cannot go beyond the background and become objective.

GT has many different interpretations and variants of implementation. As Dey (1999) writes, “there are probably as many versions of grounded theory as there were grounded theorists” (p. 2). GT allows flexibility in approach and in application. It does not require following all process, and it allows different interpretations. The authors of the concept leave the door open, saying that “grounded theory (...) may take different forms” (Glaser & Strauss, 1967, p. 31).

For example, Alison Pickard (2007) does not consider GT as a research method, but only as a process of quantitative analysis that might influence on elaborating a method. Yazdan Mansourian (2006) of the similar opinion. Pickard and Mansourian’s approaches seemed to be the most relevant in the case of this research.

The form under which theory is presented can be independent from the process of generating theory, "grounded theory can be presented either as a well-codified set of propositions or in a running theoretical discussion, using conceptual categories and their properties" (Glaser & Strauss, 1967, p. 31).

According to GT approach, a researcher has to start her/his work with an open mind: that is why the literature review should be done after data collection to avoid the formulation of initial can hypothesis.

The stages of work with GT are as following:

(1) data coding;

(2) memo writing;

(3) memo sorting;

(4) writing the theory.

The last stage leads directly to announcement of research results. All stages of work with GT are described widely in the literature (see: Glaser & Strauss, 1967; Mansourian, 2006; Tan, 2010; Wiorogórska, 2012).

In this research the objective was to verify if this method might be appropriate in the comparative study of information needs of French and Polish libraries users. GT that allows conducting observation of information users in context without returning to the categories established before seemed to be appropriate to explore the field already known by experience (i.e. work in the university library). Additionally, some kind of "methodological experimentation" was also a goal, especially that both in France and in Poland it was the first time when GT was applied to investigate the libraries users.

In this study GT has been realised in the following way:

1. No literature review was made before the survey.

An effective strategy is, at first, literally to ignore the literature of theory and fact on the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited to different areas (Glaser & Strauss, 1967, p. 37).

2. The point of departure of this study was the hypothesis suggesting that the use of scientific journals is low comparing to their high educative and scientific value.

3. Data collection. The tool used at this stage (the questionnaire) was described in details earlier, in section X.4.1. However, data collection was based not only on questionnaire but also on observations made during the work field, it means in the libraries of two universities being the subject of investigation. A comparative analysis of data collected in these two ways, based on the principles of GT, was realised in four stages described below.

a) Data coding and comparing the applicable occurrences of each category. The qualitative data were coded under conceptual categories elaborated before. Those were: "library instruction and its effect", "use of scientific journals and its problems", "use of catalogues and its problems". Each category was allotted its properties (that describe systematic relationships). For example, the category "use of scientific journals and its problems" was described by the following properties: "complex access", "mastery", "lack of assurance", "lack of instruction", "language problems", "use imposed by lecturer". The analysis and simultaneous comparison of two groups of students (French and Polish) allowed to describe the relationships and to classify data into appropriate categories. This also allowed indicating certain subjects to develop during the field observations (for example the problem related to the library instruction offer) and to suggest hypotheses related to specific situations – for this stage memo writing is useful.

b) Integration of categories and their properties. This stage served to link the groups of categories, their relationships and determination of the concept. All categories having "lack of assurance" as a property were

analysed and regrouped to the category “incertitude”. The categories “use of scientific journals” and “use of catalogues” were connected and created one category “library resources and tools and their use”. These actions allowed to limit a number of categories and to start a next stage of work which is delimitating the theory.

c) Delimitating the theory. At this stage hypothesis are clarified and their number limited, leaving only the most regular categories. This also the stage when category saturation is attained. To be sure that categories established earlier are saturated, the additional observations were made to verify if the lack of certitude and the difficulties with the use of scientific journals and tools offered by the libraries are linked with the insufficient library instruction or even with its absence.

d) Generation of theory. As Glaser and Strauss (1967) writes, “to generate substantive theory, we need many facts for the necessary comparative analysis” (p. 35). At this stage all coded data must be managed. This is the appropriate moment for gathering memos and developing a theory. The theory generated in this study helped indentify the factors that influence the lower use of resources and tools offered to students by the libraries in two countries. Two major factors were identified: (1) the lack of specialised library instruction, dedicated to doctoral students (in the case of Poland) and (2) the lack of promotion or popularisation of such instruction among doctoral students and lecturers who could encourage their students to participate (in the case of France). The information users who are not aware of the existence of certain resources or tools or who cannot explore all their functionalities (like: advanced options, data screening, data sorting, etc.) either abandon the use of these resources or use them superficially and do not benefit from their whole richness.

As Pickard (2007) underlines, the goal of the research clarifies during observations and data collecting. This proves that researcher must be prepared for discovery of non-previewed earlier and unexpected events.

And that lack of stable initial hypothesis means that there is no necessity of its later verification – as all hypotheses are the status "suggested" and they are clarified and verified during the research progress. And a new hypothesis can appear at every stage of research as well.

This research, at the beginning aiming principally at investigation the issue of use of scientific journals, broadened afterwards. In this study GT was expressed in conclusions and recommendations to ameliorate the cooperation between libraries and faculties. They will be discussed in details in section 2.7 (Conclusions and Recommendations).

According to Pace (2004), Glaser and Strauss considered GT as a method serving to generate and not to verify the theory. That is why all concept created as a result of this methodology application should be perceived as suggested and not proved. The result of research is only a set of propositions and not solutions.

Summarizing the use of GT in this research, it must be admitted that this was an interesting and enriching experience from the methodological angle. However, there still exists an awareness of study limitations and deficiency because of the fact that only some elements of GT were used and the study has not been following the integral process. But during the doctoral research that is time-limited, it was not possible to accomplish this process. The work with GT is adjusted rather to long-term projects that can be realised by a group of researchers and not by the individual. This might be also an idea for further work development – to establish a group of librarians-researchers who would more deeply explore the issue of IL in particular fields of studies or on other cycles of studies, benefiting from GT methodology.

2.4.3.2 Grounded theory and action research

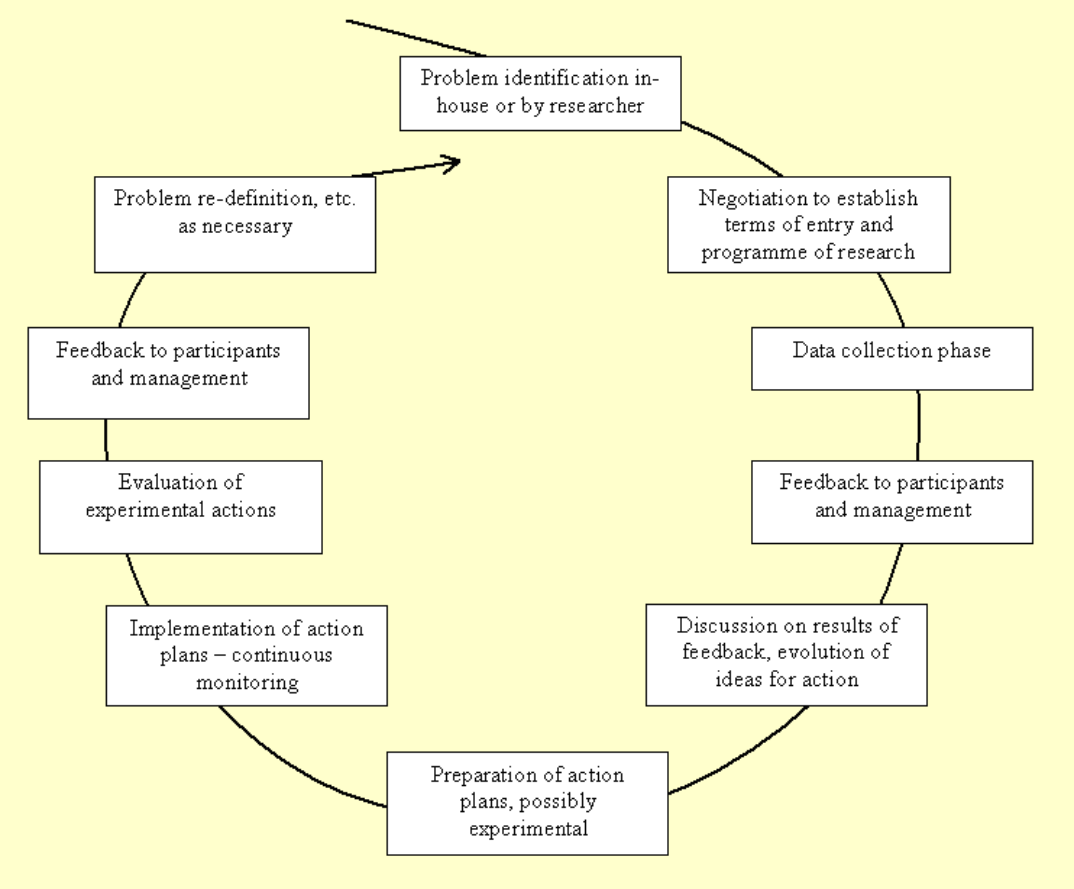
Describing GT, action research (AR) is worth mentioning as well. AR, known also under the terms: "participatory research", "collaborative inquiry", "emancipatory research", or "action learning". In AR , according to Whitehead and McNiff (2006),

> the focus swings away from the spectator research and onto the practitioner researchers. Practitioners investigate their own practice, observe, describe and explain what they are doing in company with one another, and produce their own explanations for what they are doing and why they are doing it. Practitioner researchers already know what they are doing in their everyday lives in the sense that knowledge is embodied in what they do (p. 13).

In French literature the term "recherche-action" is used and in Poland "badanie w działaniu" (see for example: Bouzon & Meyer, 2008; Lévy & Amado, 2001; Červinková & Gołębniak, 2010).

AR was briefly described here because in the French literature there are works suggesting that GT was one of the inspirations for AR (see Vacher, 2008). However, as the relationship between GT and AR is suggested only in the French literature and this is not international and popular concept, AR was mentioned here just for reliability of methodology and wider perspective for potential further development. However, parenthetically, it is good to refer here to Paulo Freire whose participatory pedagogy will be discussed later in this thesis in Chapter 3 (section 3.2.2). He was also an important contributor to AR. As well as Tom Wilson, whose illustration of the cyclical nature of the process of AR is presented on Figure 8.

Figure 8. Cyclical nature of action research process (source: Wilson, 2000).



2.5 Data collection

The questionnaire was prepared on the platform eSurveysPro.com by a Romanian software company Outside Software Inc. which is freely available on the Internet. The questionnaire was put on the eSurveysPro.com server and a link to it was distributed among the students.

The advantage of an online survey is that it saves the costs, time, and gives respondents liberty in choosing the day, time and place suitable for them to answer the survey.

The disadvantage is lack of personal contact with respondents what caused that they did not feel obliged to answer the survey and in the consequence it produced a low response rate or a high rate of skipped questions.

2.5.1 University of Warsaw

The professors responsible for doctoral studies at each of 20 faculties at the University of Warsaw were officially asked for permission to conduct the survey. Mails or phone calls were sufficient to get their consent / acceptance and to establish the cooperation. The professors were very helpful and cooperative as they noticed the importance of the survey and the fact that studies can be useful for the university.

The covering letter including the link to the survey was prepared and sent to doctoral students[34]. It was done either directly on their individual e-mail addresses or on one collective address to which all students from given faculty have an access or to the administration office of the given faculty which forwarded the correspondence to all students. The second and third option was used in the case when the administration of the faculty did not want to share the individual e-mail addresses due to doubts connected with the Act on the Protection of Personal Data (unified text - Polish Journal of Laws of July 6, 2002, No. 101, item 926). In total, the survey was distributed among 1,771 students. This number is not the defined number of doctoral students at the University of Warsaw, but the number of students with whom the faculties' administration offices have the e-mail contact.

The survey on the eSurveysPro.com platform was opened on the 16th of April 2010. That day the first part of mails were sent to the students. It was closed on the 30th of July 2010.

The total number of responses was 261, this is 14,73% of doctoral students population to which the survey was sent. This data collection rate can be treated as sufficient to formulate same observation on factors determining approach of young researchers to the use of scientific serial publications .

[34] The French and Polish versions of covering letter is provided in Appendix 10.

2.5.2 Universities of Lille

Again, the procedure was similar to the case of the University of Warsaw. The professors responsible for doctoral studies at each of five doctoral schools at the Universities of Lille were officially asked for permission to conduct the survey. Mails or phone calls were sufficient to get their consent and to establish the cooperation. Also in Lille the professors were very helpful and cooperative as they noticed the importance of the survey and the fact that studies can be useful for the university.

The covering letter including the link to the survey was prepared and sent to doctoral students[35]. It was done centrally by the administration offices of each doctoral school – they forwarded the covering letter with a link to the questionnaire to all their students. In total, the survey was distributed among 2018 students. This number is not the defined number of doctoral students at the Universities of Lille because one school was excluded from the study as its profiles could not be compared afterwards with that of University of Warsaw. This was: Doctoral School of Engineering Science (fr. Ecole Doctorale Sciences pour l'Ingénieur) of University of Lille 1.

The survey on the eSurveysPro.com platform was opened on the 8th of December 2010. That day the first part of mails were sent to the students. It was closed on the 30th of March 2011.

The total number of responses was 317, this is 15,70% of doctoral students population to which the survey was sent. This data collection rate can be treated as sufficient to formulate same observation on factors determining approach of young researchers to the use of scientific serial publications .

2.6 Data analysis

The purpose of this study was to examine the use of scientific journals among the doctoral students at the University of Warsaw and the Universities of Lille in the context of information literacy, more precisely – library instruction. It was assumed that there are differences between

[35] The French and Polish version of covering letter is provided in Appendix 9.

researchers representing different fields of research in using the continuing resources. The survey was also designed to help to determine the expectations of doctoral students, referring to the serials holdings in the academic libraries. The main focus of the research was to get the information: what kind of activities on the librarians' and lecturers' part would induce the students to read the scientific serials more often, and - above all – bring the unquestionable scientific value of serials to students' attention.

This chapter presents findings in four main sections for each university. The first section provides a descriptive analysis of respondents' general characteristics. The second section analyzes the closed-ended questions investigating the use of tools and services offered by the university libraries. The third part examines the open-ended questions. The fourth section presents the variables in relation to different respondents' groups to learn the role that these variables play in each type of group. Then, the comparative summary is presented, followed by conclusions and recommendations, major contributions of the study, limitation of the study as well as directions of further work.

There were two stages of data analysis. First, data were analyzed using the eSurveysPro.com analysis tools. They were sufficient to provide the demographic information, frequencies, percentages and all basic quantitative analysis. The second stage was a semi-manual analysis of all open-ended questions. It was not the complicated task as the total number of responses was 261 in the case of Polish and 317 in the case of French respondents.

2.6.1 University of Warsaw

2.6.1.1 Descriptive analysis and respondents' general characteristics

2.6.1.1.1 Respondents' gender

Table 3 presents the gender distribution of the sample which contained 143 females and 112 males. Six respondents did not provide this information.

Table 2.3 - Respondents' gender

Gender	Number of respondents	Percentage
Female	143	54,79%
Male	112	42,91%
Total	261	100,00%
Skipped the question	6	2,30%

2.6.1.1.2 Respondents' year of studies

Most of the respondents were on the first: 78 (29.89%) or the second: 71 (27,20%) year of their four-year-long doctoral studies. The number for the third: 48 (18,39%) and the fourth: 56 (21,46%) year is comparable. Eight respondents (3,07%) skipped this question.

Table 2.4 - Respondents' year of PhD studies

Year of studies	Number of respondents	Percentage
1^{st}	78	29,89%
2^{sd}	71	27,20%

3rd	48	18,39%
4th	56	21,46%
Total	261	100,00%
Skipped the question	8	3,07%

2.6.1.1.3 Respondents' fields of research

In Table 1 (section 2.3.1) fields of research with gender division were presented. Table 5 presented here shows a general summary of respondents' distribution in distinguished fields of research.

Table 2.5 - Respondents' field of studies

Field of research	Number of respondents	Percentage
Humanities	81	31,03%
Social Sciences	59	22,61%
Pure Sciences	109	41,76%
Applied Sciences	5	1,92%
Total	261	100,00%
Skipped the question	7	2,68%

2.6.1.1.4 Respondents' proficiency in the English language

The majority of scientific journals, especially those available electronically are provided by Anglo-Saxon publishers, so the content is in English. To determine if doctoral students know this language, the question verifying the self-perception of the English language proficiency was offered. Table 6 shows respondents' self-perceived English language level. There were 150 (57,47%) students who estimated their English proficiency as very good.

The rest of the sample had either good proficiency – 78 (29,89%), average proficiency – 23 (8,81%), or poor proficiency – 4 (1,53%). There were no students who said they did not have any English language skills. Six respondents skipped the question.

Table 2.6 - Respondents' English language proficiency

The English language proficiency	**Number of respondents**	**Percentage**
Very good	150	57,47%
Good	78	29,89%
Average	23	8,81%
Poor	4	1,53%
None	0	0,00%
Total	261	100,00%
Skipped the question	6	2,30%

2.6.1.2 Use of catalogues, tools and services offered by the university libraries

2.6.1.2.1 Use of Online Public Access Catalogues (OPACs)

The majority of respondents – 222 (85,06%) answered they have used to use OPACs. Only 37 respondents (14,18%) do not use it. Two persons did not provide the answer.

Table 2.7 - Use of OPACs

Do you use the library electronic catalog (the so-called OPAC)?	**Number of answers**	**Percentage**
Yes	222	85,06%
No	37	14,18%

Total	261	100,00%
Skipped the question	2	0,77%

2.6.1.2.2 Type of searching in OPACs

Table 8 represents the numbers and percentages of students who for OPACs searching use either simple or advanced search options. The data show that most of respondents – 168 (64,37%) use simple search while 62 students (23,75%) use advanced search. The total number of responses on this question was 230. The big number of students (31) who skipped this question can be explained by the fact that they belong to the group which in previous question marked that they do not use OPACs.

Table 2.8 - Type of searching in OPACs

What kind of search do you use while searching in a library electronic catalog?	**Number**	**Percentage**
Simple	168	64,37%
Advanced	62	23,75%
Total	261	100,00%
Skipped the question	31	11,88%

2.6.1.2.3 Knowledge and Use of The National Union Catalogue (NUKAT)

In the questionnaire there were two questions related to the Polish National Union Catalogue (NUKAT). Both were the closed-ended question. The first one inquired if the sample knows NUKAT (see Table 9). If the answer was "No", the respondents could skip the second question, asking about the frequency of using NUKAT (see Table 10).

It has appeared that almost 74% of respondents (193 students) do not know NUKAT while little more than 24% (63 students in the sample) answered they know this catalog and almost 2% (five persons) skipped the question.

Table 2.9 - General knowledge of the NUKAT Catalogue

Do you know NUKAT Catalog?	**Number of answers**	**Percentage**
Yes	63	24,14%
No	193	73,95%
Total	261	100,00%
Skipped the question	5	1,92%

However, the number of respondents who answered the question about frequency of using NUKAT was higher than the number of students who answered "Yes" in the question about the general knowledge of NUKAT. There were 78 respondents who provide the information about the frequency; 46 (17,62%) answered "sometimes", 7 respondents (2,68%) use NUKAT often and only 2 of 78 total respondents (0,77%) on this questions marked "very often". Out from 23 respondents (8,81%) who said they never use NUKAT, 15 indicated in the previous question that they do not know NUKAT at all, while 8 know this catalogue but declared that never use it.

Table 2.10 - Frequency of use NUKAT Catalog

How often do you use NUKAT Catalog?	**Number of answers**	**Percentage**
Very often	2	0,77%
Often	7	2,68%
Sometimes	46	17,62%
Never	23	8,81%
Total	261	100,00%

Skipped the question	183	70,11%

2.6.1.2.4 Use of the traditional (card) serials catalogues

At the University of Warsaw there are constantly in use the traditional card catalogues of serials. The University of Warsaw was established in 1816 and the library holdings date back to that time, but retro-conversion of the catalogs is still in progress. The number of serials bibliographic records available in the OPAC grows instantly, but the card catalogue is still available for libraries users, especially those searching old journals. It is worth mentioning that in October 2012 the whole serials card catalogue was digitised. In practice it means that it is researchable in digital format both from computers in the library and remotely. But it is still functioning as a separate catalogue and it was not treated by optical character recognition (OCR)[36] system what in fact means that the way of browsing this catalogue remains the same – users, instead of going through paper cards, go through web pages. The digitised card catalogue is integrated neither into OPAC nor into multisearcher [37]

Thus, it was interesting to investigate if the doctoral students use the card catalog. Table 11 shows the results: 166 respondents (63,60%) said they do not use it while 85 students (32,57%) use the card catalog; 10 students did not provide the answer.

Table 2.11 - Use of the card serials catalogue

Do you use the card catalog of serials?	Number of answers	Percentage
Yes	85	32,57%
No	166	63,60%

[36] OCR allows electronic searching of digitised printed texts.
[37] UWL uses Ebsco Discovery Searching (EDS) for integrating searching of e-resources.

Total	261	100,00%
Skipped the question	10	3,83%

2.6.1.2.5 Use of the A-to-Z list

In 2005 the University of Warsaw purchased an EBSCO product, A-to-Z list[38]. This is a web-based tool that provides the single, comprehensive list of the library's e-journals. The purpose of this purchase was to increase the use of electronic resources among the library users.

Two questions in the questionnaire concerned the use of that tool by doctoral students. Table 12 shows the responses on the question about general knowledge of the A-to-Z list: 144 respondents (55,17%) said they know the product and they know what it serves for, and 81 students (31,01%) answered they do not know the A-to-Z list. Probably, the part of those of 36 who skipped the question do not know A-to-Z list as well.

Table 2.12 - General knowledge of the A-to-Z list of the e-journals

Do you know the A-to-Z list? Do you know what does it serve for?	**Number of answers**	**Percentage**
Yes	144	55,17%
No	81	31,03%
Total	261	100,00%
Skipped the question	36	13,79%

Table 13 presents the answers related to the question on the use of the A-to-Z list for searching e-journals. It was the contingency question - in the previous question about the general knowledge of the A-to-Z list it was

[38] Available at: http://www2.ebsco.com/en-us/ProductsServices/atoz/Pages/index.aspx [Retrieved: 31 May 2013].

indicated that those who do not know the service can skip this question. That is why the total number of answers received to this question was 160. The distribution of responses was as follows: 53 respondents (33,13%) answered they use the A-to-Z list very often; 41 (25,63%) – often; 52 students (32,50%) said they use it sometimes, and 14 (8,75%) – never. Out of those who responded "never", 10 persons answered "no" in the previous question.

Table 2.13 - Use of the A-to-Z list for e-journals searching

Do you use the A-to-Z list to search electronic journals?	**Number of answers**	**Percentage**
Very often	53	20,31%
Often	41	15,71%
Sometimes	52	19,92%
Never	14	5,36%
Total	261	100,00%
Skipped the question	101	38,70%

2.6.1.3 Library instructions

The other set of questions was related to the library instruction and users' opinions about the offer of those trainings provided by the University of Warsaw libraries as well as expectations connected with the trainings offer.

2.6.1.3.1 Participation in the library instruction

The majority of respondents – 192 (73,56%) answered they participated in a library instruction and 65 students (24,90%) said they did not. This was the first of the series of contingency questions that were aiming to verify if the services offered by the library are sufficient in the students' opinion. Four respondents skipped the question.

Table 2.14 - Participation in a library instruction

Have you been already participating in the library instruction?	**Number of answers**	**Percentage**
Yes	192	73,56%
No	65	24,90%
Total	261	100,00%
Skipped the question	4	1,53%

Traditionally, the University of Warsaw Library suggested group trainings in its building. However, since 2003 it has been conducting the online library course as well. In 2008 the updated version of the online instruction was launched. It has been created under Moodle software and is accessible on the COME (Centre for Open and Multimedia Education) platform[39]. The library instruction is offered first of all for undergraduate students (it is compulsory for students of several faculties), but because its online version has been available for seven years, it can be assumed that some of doctoral students (especially those studying on the first year) could have been already participating in the online course if they had been doing their bachelor or master degree at the University of Warsaw as well.

However, Table 15 shows that 190 students (72,80%) participated in the traditional instruction in the library building, while only 5 (1,92%) respondents took the online course. The question was skipped by 66 persons, but it was allowed as it was the contingency question, so if in the question about participation in the library instruction the answer was "No", the respondent could omit the next question.

[39] Available at: http://www.come.uw.edu.pl/?q=en [Retrieved: 31 May 2013].

Table 2.15 - Type of library instruction

Was it (the library instruction):	**Number of answers**	**Percentage**
A group training in the library building?	190	72,80%
An e-learning online course?	5	1,92%
Total	261	100,00%
Skipped the question	66	25,29%

2.6.1.3.2 Library instruction and electronic resources

The first of two main interests was to investigate if in the users' opinion the library instruction covered sufficiently the subject of scientific journals (especially the electronic ones) and if the time consecrated on this topic during the training was enough for users to conduct their own research afterwards. To explore this issue, the set of questions was provided.

Table 16 presents the results of general question if the access to e-resources was explained during the library instruction. Almost 60% of respondents (156 persons) answered "No" while 48 doctoral students (18,39%) answered "Yes". This was the next contingency question, so those who did not participate in the library instruction could skip it.

Table 2.16 - Access to electronic resources and library instruction

Was the access to e-resources explained during the library instruction?	**Number of answers**	**Percentage**
Yes	48	18,39%
No	156	59,77%
Total	261	100,00%
Skipped the question	57	21,84%

Those who answered “No” in the previous question could skip the next one, investigating the users’ opinion if the electronic resources issue was explained sufficiently to conduct one’s own researches afterwards. There was exactly the same rate of respondents who said “Yes”: 29 students (11,11%) and those who said “No”: also 29 students (11,11%).

Table 2.17 - The efficiency of library instruction

Do you think it was explained efficiently for you to use it individually afterwards?	**Number of answers**	**Percentage**
Yes	29	11,11%
No	29	11,11%
Other answer	21	8,05%
Total	261	100,00%
Skipped the question	182	69,73%

However, this question was not closed-ended and provided the opportunity to leave user’s own answer. There were 21 additional opinions (8,05%) left by respondents that can be divided into four groups. First group (3 answers) was the answers of students who participated in the library instruction before the electronic resources were acquired. These were answers like: “the training was a long time ago, in that time there were not e-resources available”. In the second group (7 answers) the respondents said that they participated in the training a long time ago and they simply do not remember if electronic resources were discussed there. The third group (3 answers) consisted of the statement that respondents have never participated in the library instruction. In the fourth group there were 8 different opinions, translated from Polish and cited below:

1. “The topic was explained sufficiently, but there are not electronic journals from my domain (oriental studies). I use the printed journals which are available on my faculty or abroad”

2. “Knowledge can be gained by experience”

3. “There were no details explained and no exercises conducted”

4. “I participated in special trainings at the Oxford University, but not in Warsaw. They were extremely useful”

5. “I found myself that possibility while browsing the library web page. The instruction and information available on the web page are not sufficient”

6. “I participated in an additional electronic resources instruction”[40]

7. “I have an impression that students do not realize opportunities which for example Jstor database gives. The problem lies in the lack of information because the handling itself is simple”

8. “Generally, first one searches is Google Scholar and next, the concrete articles, in databases”.

The next two questions were closed-ended ones and were used to investigate if the library instruction and all kind of didactic materials offered by the library are sufficient in students’ opinion and if the respondents are interested in the additional bibliographical instruction related to use journals for the research work.

Table 18 presents the answers to the questions considering the sufficiency of library instruction and didactic materials. Distribution of responses was as follow: 133 respondents (50,96%) answered that the instruction and materials are not sufficient while 79 (30,27%) said they are. There were 49 respondents who skipped this question.

[40] Additional instruction (on demand) in terms of access to e-resources started in 2004 at the University of Warsaw.

Table 2.18 - Sufficiency of library instruction and didactic materials offered by the library

Do the library instructions on how to use electronic journals are sufficient for you?	**Number of answers**	**Percentage**
Yes	79	30,27%
No	133	50,96%
Total	261	100,00%
Skipped the question	49	18,77%

Table 19 shows the number and percentage of students inquired if they are interested in additional bibliographic instruction. There were 142 respondents (54,41%) who answered "Yes" while 113 (43,30%) gave a negative answer, and 6 students skipped this question.

Table 2.19 - Additional bibliographic instruction

Would you be interested in some additional bibliographic instruction on how to use journals for the research work?	**Number of answers**	**Percentage**
Yes	142	54,41%
No	113	43,30%
Total	261	100,00%
Skipped the question	6	2,30%

2.6.1.3.3 The use of scientific journals (both in print and electronic version)

The second main purpose of this research was to investigate if doctoral students read scientific journals, in what purpose and what there are in their opinion the biggest obstacles for not using this source of information. The questionnaire contained the set of five closed-ended, open-ended and multiple-choice questions related to this issue.

Table 20 shows the answers distribution to the question about the frequency of reading journals from respondents' field of studies: 92 students (35,52%) answered they read them very often, 95 persons (36,40%) said "Often" while 71 respondents (27,20%) stated "Sometimes" and one of them indicated (0,38%) "Never". Two persons skipped the question.

Table 2.20 - Frequency of scientific journals reading

Do you read scientific journals related your field of studies?	**Number of answers**	**Percentage**
Very often	92	35,25%
Often	95	36,40%
Sometimes	71	27,20%
Never	1	0,38%
Total	261	100,00%
Skipped the question	2	0,77%

The next question (Table 21) was the closed-ended question surveyed the respondents' awareness of online scientific journals. More than 84% of respondents (220 students) answered they are aware of the existence of several thousands of online scientific journals while about 15% (39 students) said they are not. Again, two persons skipped the question.

Table 2.21 - The awareness of the existence of online scientific journals

Are you aware of the existence of several thousands of online scientific journals accessible at the University of Warsaw?	**Number of answers**	**Percentage**
Yes	220	84,29%
No	39	14,94%
Total	261	100,00%
Skipped the question	2	0,77%

The next issue was to test the use of electronic journals available at the University of Warsaw by the doctoral students. In this purpose the question about the frequency of reading e-journals was provided. Table 22 shows the results: 74 respondents (28,35%) said they read e-journals very often, 61 students (23,37%) answered "Often" while 73 persons (27,97%) marked "Sometimes" and 20 persons (7,66%) – "Never"; 33 respondents did not provide the answer.

Table 2.22 - Frequency of reading electronic journals

Do you read electronic journals the library provides?	**Number of answers**	**Percentage**
Very often	74	28,35%
Often	61	23,37%
Sometimes	73	27,97%
Never	20	7,66%
Total	261	100,00%
Skipped the question	33	12,64%

The main aims of reading scientific journals by doctoral students were also the subject of investigation. For this purpose three multiple-choice opened questions including three contingency questions were provided. The general question was: "For what purpose do you read scientific journals"? Table 23 represents the detailed results.

Table 2.23 - Purpose of reading scientific journals

For what purpose do you read scientific journals?				**TOTAL**
	Yes	**No**	**Skipped the question**	
1. For preparing your thesis?				***261***
	253	**5**	**3**	
If yes, what will be the estimated number of journal articles cited in your thesis?				
10-30	55			
31-60	51			
61-100	20			
more than 100	83			
I do not know	31			
I do not know	55			
Skipped	13			
2. For your classes preparation?				
	224	**21**	**16**	**261**

If yes, is it your lecturer / tutor who asks you to read certain articles or do you do it of your own will?					
	Recommended by lecturers / tutors	31			
	Own decision of the student	125			
	Both options	65			
	Skipped	3			
3. For other purposes, not related with thesis?					
		244	**15**	**2**	**261**
If yes, is it connected with your study field?					
	Yes	194			
	No	10			
	Sometimes	34			
	Skipped	6			

The results revealed that the majority of students (253 – 96,93%) read scientific journals for the purpose of their thesis, but they do it for their personal use as well (244 positive answers – 93,49%). But still, even the journals read for the personal use are mostly connected with the study field (194 positive answers – 79,51%). If doctoral students read journals to prepare themselves for classes, the majority of respondents (224 – 85,82%) do it of their own will.

Apart from scientific journals, both in print and electronic version, there exists a number of online open electronic archives and repositories where the scientific works can be published and which allow researchers to create their own account and easily upload the papers afterwards. So, it was important to investigate whether the doctoral students are aware of the existence of

these resources and if they have already used them. Two questions were asked: "Are you aware of the existence of the open online archives and repositories?" and "Have you already published any of your works in such an archive or repository?" Tables 24 and 25 present the obtained results.

Table 2.24 - Awareness of the existence of the open online archives and repositories

Are you aware of the existence of the open online archives and repositories?	**Number of answers**	**Percentage**
Yes	134	51,34%
No	124	47,51%
Total	261	100,00%
Skipped the question	3	1,15%

The answers presented above show that the number of persons who know about the existence of repositories (134 – 51,34%) is almost the same as the number of those who do not have this awareness (124 – 47,51%). However, the number of students who have already published their works in such bases is very low - only 27 students (10,34%) gave positive answer to the question on publishing of their own text in OA repositories (see Table 25). Thirty respondents skipped the question – it can be assumed that they have not published their work in OA repositories.

Table 2.25 - Publishing in open online archives and repositories

Have you already published any of your works in such an archive or repository?	**Number of answers**	**Percentage**
Yes	27	10,34%

No	204	78,16%
Total	261	100,00%
Skipped the question	30	11,49%

The respondents were asked to write the name of the database in case they answered positively the question above. The students indicated following bases: the University of Warsaw Archive of Diploma Dissertations (pl. Archiwum Prac Dyplomowych Uniwersytetu Warszawskiego) [n=10], Arxiv.org [n=7] and PubMed Medline Embase [n=2]. There were also single indications on: HAL (Hyper Articles en Ligne), ICM - Interdisciplinary Centre for Mathematical and Computational Modelling (Pl. Interdyscyplinarne Centrum Modelowania Matematycznego i Komputerowego), Astro-Ph, Mises Institute Working Papers and on Working Papers of Institute for Structural Research (Pl. Prace Instytutu Badań Strukturalnych).

The main barriers that can have an influence on the limited use of scientific journals by doctoral students were also the subject of investigation. The close-ended questions with 11 multiple-choice answers were asked and there was also a place left for open-comments of respondents. The answers on closed-ended questions are presented in Table 26. The single respondents' answers are described below Table 26. The answers were received from 247 students, 14 respondents skipped this question. The biggest number of respondents marked the option "No obstacles – I use scientific journals very often" (109 indications). Two optional answers gained the similar percentage – 63 respondents declared that they were not trained how to access and use journals and 62 – that the printed journals provided by the library are not comfortable in use. The next three possible obstacles with the similar percentage were: for 50 respondents - most of scientific journals provided by the library are not related to their field; for 47 respondents - the library does not help me improve my knowledge about scientific journals; for 42 respondents - the electronic journals the library provides are complicated in

usage. Furthermore, there were less often answers marked, like: "I do not know how to search in bibliographies of journals" (38 answers); "there are no librarians who know how to help me in searching scientific journals" (25 indications); "I was not informed about the importance of scientific journals" (17 respondents marked this option); "most of scientific journals (especially electronic ones) are in foreign languages" – the number of indications was 16. Only 2 students marked the option "I read only the articles that my lecturers ask me to read" as the possible obstacle; 14 respondents skipped the question.

Table 2.26 - Obstacles for not using scientific journals

What would be the main obstacles for not using scientific journals or rarely using them for meeting your information needs?	**Number of answers**
No obstacles – I use scientific journals very often	109
I was not trained how to access and use journals	63
The printed journals the library provides are not comfortable in use	62
Most of scientific journals provided by the library are not related to my field	50
The library does not help me improve my knowledge about scientific journals	47
The electronic journals the library provides are complicated in usage	42
I do not know how to search in journals bibliographies	38
There are no librarians who know how to help me in searching scientific journals	25
I was not informed about the importance of scientific journals	17
Most of scientific journals (especially electronic ones) are in foreign languages	16
I read only the articles that my lecturers ask me to read	2
Total	485
Skipped the question	14

The single answers [n=6] provided by users were as follows:

- The lack of archive articles and staff's unwillingness to order them from other libraries' holdings

- The fact that the newest articles from the leading journals in my field are not always fully accessible (databases: Elsevier, Springer, Annuals Reviews, etc.)

- Access to journals published before 1990 is sometimes problematic

- Fees for articles. Not all papers are in open repositories, many text are payable

- One-year embargo on many leading journals in a field

- Unintuitive way of journal searching.

As it was written before, the majority of scientific journals, especially those available electronically, offer the content in English. In Table 6 the results of respondents' self-evaluation of their proficiency in English was presented. However, it should be emphasized that not in all fields of research the knowledge of English is crucial for access to results of international researches. For instance, for historians very important is German, for linguists – the language of their research. Besides, there is certain content offered in foreign languages other than English and the intention was also to investigate what other languages are known by doctoral students. The data presented in Table 27 show the very wide range of languages, sometimes very unusual or exotic (from the Polish point of view) ones. Only 3% of total number of doctoral students at the University of Warsaw is foreigners[41], so it can be assumed that foreign languages were indicated mostly by Polish student. There were 214 students who responded to this question, 47 skipped it.

[41] Data published in University of Warsaw Annual Report 2010, available at: http://www.uw.edu.pl/strony/o_uw/dok/spraw2010/spraw2010.pdf [Retrieved: 31 May 2013].

Table 2.27 - The knowledge of other foreign languages

What other foreign language(s) do you know?	**No. of respondents declaring knowledge of this language**
German	127
French	79
Russian	67
Spanish	36
Italian	28
Latin	13
Portuguese	9
Chinese, Dutch, Hebrew, Japanese	5
Swedish	4
Arabic, Greek, Syrian, Turkish,	3
Belarusian, Croatian, Czech, Indonesian, Norwegian, Persian, Slovak, Ukrainian, Yiddish	2
Azerbaijani, Bengali, Hungarian, Latvian, Lithuanian, Malay, Polish Sign language, Romanian, Swahili,	1

2.6.1.4 The field of study and different aspects of the use of scientific journals variables

As it was said previously, out of 261 respondents, 109 respondents represented Pure Sciences, 81 – Humanities, 59 – Social Sciences and 5 – Applied Sciences (7 respondents did not indicate the field of study). The bivariate analysis with two variables was conducted: dependent and independent one to see what is the relationship between the field of study and the aspects related to the use of scientific journals among doctoral students at the University of Warsaw. The results of this analysis are presented in this part of the dissertation in seven contingency tables.

2.6.1.4.1 The use of a card catalogue and the field of study

On the question about use of card catalogues, students of Humanities gave the dominant number of positive responses. The detailed data are presented in Table 28. Out of 81 representatives of this field of study, 42 (51,85%) use the card catalogue, while 37 (45,68%) do not. This result shows the balance in Humanities that can not be observed in other fields of study. Out of 109 Pure Science students, only 23 (21,49%) gave the positive answer, while 84 (77,06%) answered that they do not use the card catalogue. Among the 59 students of Social Sciences who answered this question, 18 (30,51%) gave the positive answer, while 40 (67,80%) the negative one. Out of 5 representatives of Applied Sciences, 1 (20%) uses the card catalogue, while 4 (80%) do not. Thus, it can be stated that the card catalogue is still useful source of bibliographic information for doctoral students, but the majority of its users comes from the Humanities. This question was skipped by 7 respondents.

Table 2.28 - Relationship between the use of card catalogues and the field of study

Field of study	**Do you use the paper catalogue of serials?**			
	Yes	**No**	**No answer**	**Total**
Applied Sciences	1	4		5
Humanities	42	37	2	81
Pure Sciences	23	84	2	109
Social Sciences	18	40	1	59
Skipped				7
	84	165	5	261

2.6.1.4.2 Reading of scientific journals and the field of study

This question was asked to examine if doctoral students read in general the scientific journals from their field of study. That is why the question did not indicate any specific form of journals (like printed or electronic). Only 1 respondent, the representative of Humanities declared "never". The majority of students answered they read scientific journals "often". Out of 94 answers, 37 (39,36%) came from the representatives of Pure Sciences, 30 (31,91%) – Humanities, 26 (27,66%) – Social Sciences and 1 (1,06%) – from Applied Sciences. However, the indication "very often" also gained a high score. Out of 91 respondents who marked this option, 46 (50,55%) came from Pure Sciences, 27 (29,67%) – from Humanities, 16 (17,58%) – from Social Sciences and 2 (2,20%) represented Applied Sciences. The answer "sometimes" scored 68 answers, out of which 26 (38,24%) came from Pure Sciences, 23 (33,82%) – Humanities, 17 (25,00%) – Social Sciences and 2 (2,94%) – from Applied Sciences students. The result gave the positive image of doctoral students at University of Warsaw, the scientific journals are read by them regularly. The detailed results are presented in the Table 29. Seven respondents skipped the question.

Table 2.29 - Reading of scientific journals related to the field of study

Field of study	**Do you read scientific journals from your field of studies?**					
	Very often	**Often**	**Sometimes**	**Never**	**No answer**	**Total**
Applied Sciences	2	1	2			5
Humanities	27	30	23	1		81
Pure Sciences	46	37	26			109
Social Sciences	16	26	17			59
Skipped						7
	91	94	68	1		261

2.6.1.4.3 Reading of e-journals provided by the library and the field of study

The next variable to examine was the relationship between the field of research and the frequency of reading the electronic journals. Once it was discovered that students in general read regularly the scientific journals, it was essential to detail if the given answers are related to printed or electronic journals and if there is a significant relationship between these two variables. Thus, the question about e-journals was asked. The data are presented in Table 30. In this case, the number of "never" answers scored 20, out of which 9 (45%) was given by students of Humanities, 7 (35%) – Social Sciences and 4 (20%) – Pure Sciences. No representative of Applied Sciences chose this answer. The options with the highest score were "very often" and "sometimes". Out of 74 respondents who said "very often", 47 (63,51%) answers came from Pure Sciences and this field of study was represented the most numerously and had the biggest impact of the resulted score. 15 answers (20,27%) were given by the representatives of Humanities, 10 (13,51%) – Social Sciences and 2 (2,70%) – Applied Sciences. While "sometimes" option was marked by 72 students, out of whom 26 (36,11%) came from Pure Sciences, 24 (33,33%) – from Social Sciences and 22 (30,56%) – from Humanities. In this case, the percentage result was evenly spread among three fields of study. No one representing Applied Sciences chose this option. The were 59 indications for "often" option, out of which 28 (47,46%) were given by the Pure Sciences students, 16 (27,12%) – Social Sciences, 14 (23,73%) – Humanities and 1 (1,69%) – Applied Sciences. Seven respondents skipped the question. The result shows that there are still students who do not read electronic journals at all. On the other hand, the Pure Sciences students tend to use this form of journals more frequently than the representatives of other fields of study. This result confirms the general characteristic of differences in structure and reserahc prcess in particular disciplines. As Grafstein (2002) writes:

> Disciplines have different epistemological structures, and, for this reason, the research process is not identical across

disciplines. The ways in which knowledge is organized in different disciplines determine, among other things, the scope of the research questions that can be asked, the rules of evidence that are recognized within the discipline as valid for supporting claims, the kind of criteria that can be used to evaluate claims critically, the sources researchers consult to find information and the nature of the statements that must be cited (p. 201).

Table 2.30 - Relationship between reading of e-journals provided by the library and the field of study

Field of study	**Do you read electronic journals that library provides?**					
	Very often	**Often**	**Sometimes**	**Never**	**No answer**	**Total**
Applied Sciences	2	1			2	5
Humanities	15	14	22	9	21	81
Pure Sciences	47	28	26	4	4	109
Social Sciences	10	16	24	7	2	59
Not indicated						0
Skipped						7
	74	59	72	20	29	261

2.6.1.4.4 Barriers and obstacles for not using or limited use of scientific journals and the field of study

Results presented in the contingency Table 31 show the bivariate analysis of relationship between the field of study and the main barriers that limit the use of scientific journals by PhD students. The aim was to determine types of obstacles that are the most important for students and the most significant for particular field of study. There were 11 options to choose in this multiple-choice question. The first option was “No obstacles – I use scientific journals

very often" and it was marked by 110 students[42] (42,14%), out of whom 62 (56,36%) represented Pure Sciences, 24 (21,82%) – Humanities, 22 (20%) – Social Sciences and 2 (1,82%) – Applied Sciences. These results confirm the earlier observed tendency that the students of Pure Sciences use the scientific journals more often than others. The rest of suggested obstacles can be divided into four groups that can be named: library instruction, library acquisition policy, library services and users' attitude.

Obstacles related to library instruction.

1. "I was not trained how to access and use journals". There were 62 (23,75%) respondents who marked this answer, out of whom 23 (37,10%) represented Humanities, 20 (32,26%) – Social Sciences, 17 (27,42%) – Pure Sciences, 1 (1,61%) – Applied Sciences and 1 answer (1,61%) was given without indicating the field of study. This result shows the correlation between lower use of journals and lack of library instruction among the Humanities PhD students.

2. "The library does not help me improve my knowledge about scientific journals". 47 respondents (18%) gave this answer, the percentage result was evenly spread among all fields of study. There were 16 (34,04%) answers of Humanities students and 16 (34,04%) of Pure Sciences ones. This option was marked by 13 (27,66%) Social Sciences students and 2 (4,26%) Applied Sciences ones. This result shows that some of students feel that library help is not sufficient in the domain of supporting the use of scientific journals.

3. "I do not know how to search in journals bibliographies". Out of 38 respondents (14,56%), the biggest number - 17 (44,74%) represented Humanities, for which the journals bibliographies are a very important source of information. The overall number of Humanities representatives was 81 (see Table 1). For Pure Sciences and Social Sciences, the percentage result was evenly spread, there were 9 (23,68%) answers coming from Pure Sciences students and 9 (23,68%) – from Social Sciences ones. There was one

[42] Out of the whole sample [N=261].

representative of Applied Sciences (2,63%) and 2 (5,26%) who did not mark their field of study.

4. "I was not informed about the importance of scientific journals". 17 respondents (6,51%) marked this answer, out of whom the same number – 7 (41,18%) represented Pure Sciences and Social Sciences, and 3 (17,64%) – Humanities.

Obstacles related to library acquisition policy.

1. "Most of the scientific journals provided by the library are not related to my field". The total number of responses received on this statement was 50 (19,16%), out of which the majority – 27 (54%) was given by the Humanities students. It proves the common opinion that the most of scientific journals, especially the electronic and foreign ones concentrate on Pure Sciences, Technology and Medicine, thus the Humanities students cannot find too many titles related strictly to their field of study. The same situation seems to be in a case of Applied Sciences. From overall number of representatives of this domain (n=5, see Table 1), 3 marked this answer what in this question scored in 6% result. 11 respondents (22%) came from Pure Sciences, 7 (14%) from Social Sciences, while 2 (4%) did not provide the field of their study.

Obstacles related to library services.

1. "The printed journals the library provides are not comfortable in usage". This statement scored 62 responses (23,75%). The biggest number of responses, 27 (43,55%) was given by the Pure Sciences students, while the 19 (30,65%) Humanities students and 14 (22,58%) Social Sciences ones marked this option. As for Applied Sciences – 2 (3,23%) respondents chose this obstacle. The result confirm earlier conclusion that the Pure Sciences students quite flexibly adopted new technology, i.e. journals in electronic format and they mostly use this format of periodicals, seeing it as more comfortable.

2. "There are no librarians who know how to help me in searching scientific journals (print and electronic)". This option was marked 25 times (9,58%), out of which 11 (44%) came from the Humanities students, 7 (28%) – from the

Social Sciences students, 6 (24%) – from the Pure Sciences ones and 1 (4%) – from the representative of Applied Sciences. These results show that especially the Humanities doctoral students are not satisfied enough with the library staff's help in the domain of use of scientific journals and it can be a factor causing the lower use of this source of information among the students.

3. "The electronic journals the library provides are not clear and easy to use". 42 respondents (16,09%) marked this answer, out of whom 14 (33,33%) represented Humanities and 14 (33,33%) Pure Sciences, 11 (26,19%) – Social Sciences, and 2 (4,76%) – Applied Sciences. One respondent (2,39%) did not provide the field of her/his study.

Obstacles related to user's attitude.

1. "Most of scientific journals (especially electronic ones) are in foreign languages". This obstacle was marked by 16 respondents (6,13%), out of whom 6 (37,5%) represented Humanities and 6 (37,5%) Pure Sciences, 3 (18,75%) were the representatives of Social Sciences, and one person (6,25%) – the Applied Sciences. Comparing these responses with the data presented in Table 5 (Respondents' English language proficiency) and Table 33 (Relationship between the English self-perceived proficiency and the field of study) these results confirm that the average English proficiency level among PhD students at the University of Warsaw is quite high and they do not see the significant obstacle in the fact that the majority of scientific journals are published in English. Comparing the number of responses received to this question (n=16) with the overall number of the survey respondents (N=261), it gives only 6,27% of students who consider it as a barrier in access to scientific journals.

2. "I read only the articles that my lecturers ask me to read". This option was marked by two students (0,77%): one (50%) was the representative of Humanities, the second one (50%) – the Pure Sciences. Comparing these

results with the overall number of the survey respondents (N=261), it gives hardly 0,78% of all students who participated in the survey.

Table 2.31 - Relationship between barriers and obstacles for not using or the limited use of scientific journals and the field of study

What would be the main obstacles for not using scientific journals or rarely using them for your information needs?	**Applied Sciences**	**Humanities**	**Pure Sciences**	**Social Sciences**	**Field of study not given**	**Total n (%)**
No obstacles – I use scientific journals very often	2	24	62	22	0	110 (42,14%)
I was not informed about the importance of scientific journals	0	3	7	7	0	17 (6,51%)
I was not trained how to access and use journals	1	23	17	20	1	62 (23,75%)
I do not know how to search in journals bibliographies	1	17	9	9	2	38 (14,56%)

The library does not help me improve my knowledge about scientific journals	2	16	16	13	0	47 (18,00%)
There are no librarians who know how to help me in searching scientific journals (print and electronic)	1	11	6	7		25 (9,58%)
I read only the articles that my lecturers ask me to read	0	1	1	0	0	2 (0,77%)
Most of scientific journals (especially electronic ones) are in foreign languages	1	6	6	3	0	16 (6,13%)
Most of the scientific journals provided by the library are not related to my field	3	27	11	7	2	50 (19,16%)
The electronic	2	14	14	11	1	42

journals the library provides are not clear and easy to use						(16,09%)
The printed journals the library provides are not comfortable in usage	2	19	27	14		62 (23,75%)
No answer	0	3	7	4	0	14 (5,36%)
Total	15	164	183	117	6	485

2.6.1.4.5 Awareness of the existence of the online archives and repositories and the field of study

The results presented in details in Table 32 show that not all doctoral students know that open online archives and repositories exist. Apart from the representatives of Pure Sciences, the students who do not have knowledge are not in the majority. Out of 5 Applied Sciences students, 2 (40%) are aware, while 3 (60%) are not. 39 (48,15%) of Humanities students know that archives and repositories exist, while 42 (51,85%) do not. As for Social Sciences – 19 (32,20%) respondents confirmed their awareness and 39 (66,10%) did not. As it has been already mentioned, the proportion is reverse in the case of Pure Sciences students – 72 (66,06%) of them are aware of the existence the open online archives and repositories, while 36 (33,03%) are not.

Table 2.32 - Relationship between the awareness of the existence the online archives and repositories and the field of study

Field of study	**Are you aware of the existence of the open online archives and repositories?**			
	Yes	**No**	**No answer**	**Total**
Applied Sciences	2	3		5
Humanities	39	42		81
Pure Sciences	72	36	1	109
Social Sciences	19	39	1	59
Skipped				7
	132	120	2	261

2.6.1.4.6 An interest in additional bibliographic instruction on scientific journals and the field of study

The results presented in the contingency Table 33 show that doctoral students in general are interested in additional library instruction and, apart from the representatives of Pure Sciences, interested students are in the majority. Out of 5 Applied Sciences students, 4 (80%) are interested in such instruction, while 1 (20%) is not. 55 (67,90%) of Humanities students would like to have an additional instruction, while 23 (28,40%) would not. As for Social Sciences – 39 (66,10%) respondents express this willing and 20 (33,90%) do not. As it has been already mentioned, the proportion is reverse in a case of Pure Sciences students – 43 (39,45%) of them are interested in additional library instruction, while 66 (60,55%) are not.

Table 2.33 - Relationship between interest in additional bibliographic instruction on scientific journals and the field of study

Field of study	**Would you be interested in some additional bibliographical instruction on how to use the journals for the research work?**			
	Yes	**No**	**No answer**	**Total**
Applied Sciences	4	1		5
Humanities	55	23	3	81
Pure Sciences	43	66		109
Social Sciences	39	20		59
Skipped				7
	141	110	3	261

2.6.1.4.7. The English self-perceived proficiency and the field of study

As it was presented in Table 6, the majority of respondents described their English proficiency as "very good" (n=150) or "good" (n=78). The option "average" was indicated by 23 students and "poor" by four. No one marked the option "none". Thus, the next step was to examine the relationship between the English level proficiency and the field of study. Being aware that the majority of scientific journals, especially the electronic ones is published in English, the aim was to investigate if the proficiency level of this language affects significantly the use of journals. In this case the answers "very good" and "good" are the most important, as it can be assumed that students that declared fluency in English can be independent readers of journals published in English. In result, the obtained data showed that there is no large percentage difference in "very good" and "good" level between the representatives of four field of study. In relationship between the "very good" and "good" answers and the total number of representatives of the given field of study, there were 54 (91,53%) coming from the Social Sciences students, 98 (89,91%) – Pure Sciences, 71 (87,65%) – Humanities and 4

(80%) – Applied Sciences. This shows that in the case of each of four fields of study examined here, more than three-fourths of population self-evaluated its English proficiency at a high level. Thus, it should not be a significant obstacle against the use of scientific journals published in English.

Table 2.34 - Relationship between the English self-perceived proficiency and the field of study

Field of study	**What is your English language proficiency?**					
	Very good	**Good**	**Average**	**Poor**	**No answer**	**Total**
Applied Sciences	1	3	1			5
Humanities	56	15	7	3		81
Pure Sciences	54	44	11			109
Social Sciences	39	15	4	1		59
Skipped						7
	150	77	23	4		261

2.6.2 Universities of Lille

2.6.2.1 Descriptive analysis and respondents' general characteristics

2.6.2.1.1 Respondents' gender

Table 35 presents the gender distribution of the sample which contained 163 females and 131 males. Twenty-three respondents did not provide this information.

Table 2.35 - Respondents' gender

Gender	**Number of respondents**	**Percentage**
Female	163	51,42%
Male	131	41,32%
Total	317	100,00%

Skipped the question	23	7,26%

2.6.2.1.2 Respondents' year of studies

Most of the respondents were on the fifth or more year of their doctoral studies: 219 (69,09%%). The number for the third: 23 (7,26%), and the second year 22 (6,94%) is comparable. There were 15 respondents (4,73%) from the fourth year, and 14 (4,42%) from the first year. Twenty-four respondents (7,57%) skipped this question.

Table 2.36 - Respondents' year of PhD studies

Year of studies	**Number of respondents**	**Percentage**
1^{st}	14	4,42%
2^{sd}	22	6,94%
3^{rd}	23	7,26%
4^{th}	15	4,73%
5^{th} *and more*	219	69,09%
Total	317	100,00%
Skipped the question	24	7,57%

2.6.2.1.3 Respondents' fields of studies

In Table 2 fields of studies with gender division were presented. Table 37 shows the total number.

Table 2.37 - Respondents' field of studies

Field of research	Number of respondents	Percentage
Humanities	58	18,30%
Social Sciences	121	38,17%
Pure Sciences	99	31,23%
Applied Sciences	15	4,73%
Total	317	100,00%
Skipped the question	24	7,57%

2.6.2.1.4 Respondents' proficiency in the English language

The majority of scientific journals, especially those available electronically are provided by Anglo-Saxon publishers, so the content is in English. To determine if doctoral students know this language, the question verifying the self-perception of English was offered. Table 38 shows respondents' self-perceived English language level. The number of students who estimated their English proficiency as very good was relatively small – 35 (11,04%). The majority answered that their English proficiency was either average – 135 (42,59%), or good – 103 (32,49%). The answer poor was marked by 21 (6,62%) respondents. There were no students who said they did not have any English language skills. 24 students (7,57%) skipped this question.

Table 2.38 - Respondents' English language proficiency

English language proficiency	Number of respondents	Percentage
Very good	35	11,04%
Good	103	32,49%
Average	135	42,59%
Poor	21	6,62%
None	0	0,00%

Total	317	100,00%
Skipped the question	23	7,26%

2.6.2.2 Use of catalogues, tools and services offered by the university libraries

2.6.2.2.1 Use of Online Public Access Catalogues (OPACs)

The majority of respondents – 234 (73,82%) answered that they use OPACs, 71 respondents (22,40%) do not use it, and 12 respondents (3,79%) skipped this question.

Table 2.39 - Use of OPACs

Do you use the library electronic catalog (the so-called OPAC)?	**Number of answers**	**Percentage**
Yes	234	73,82%
No	71	22,40%
Total	317	100,00%
Skipped the question	12	3,79%

2.6.2.2.2 Type of searching in OPACs

Table 40 represents the numbers and percentages of students who for OPACs searching use either simple or advanced search options. The data show that most of respondents – 141 (44,48%) use simple search while 121 students (38,17%) use advanced search. The big number of students (55) who skipped this question can be explained by the fact that they belong to the group which in previous question marked that they do not use OPACs.

Table 2.40 - Type of searching in OPACs

What kind of search do you use while searching in a library electronic catalogue?	Number of answers	Percentage
Simple	141	44,48%
Advanced	121	38,17%
Total	317	100,00%
Skipped the question	55	17,35%

2.6.2.2.3 Knowledge and Use of The SUDOC Catalogue

In the questionnaire there were two questions related to the "Système Universitaire de Documentation" (Sudoc) catalogue. Both were the closed-ended question. The first one inquired if the sample knows Sudoc (see Table 41). If the answer was "no", the respondents could skip the second question, asking about the frequency of using Sudoc (see Table 42).

201 students (63,41%) know Sudoc while 103 (32,49%) answered they do not know this catalog; 13 respondents (4,10%) skipped this question.

Table 2.41 - General knowledge of the Sudoc Catalogue

Do you know SUDOC Catalogue?	Number of answers	Percentage
Yes	201	63,41%
No	103	32,49%
Total	317	100,00%
Skipped the question	13	4,10%

However, the number of respondents who answered the question about the frequency of using Sudoc was higher that the number of students who answered "yes" in the question about the general knowledge of Sudoc. There were 213 respondents who provide the information about the frequency. The majority of them, 94 (29,65%) said they use Sudoc "sometimes", 56 respondents (17,67%) use Sudoc often and 35 of 213 total respondents (11,04%) on this questions marked "very often". From the group of 28 (8,83%) students who answered "never", 11 indicated in the previous question that they do not know Sudoc, while 17 declared they know this catalogue but never use it.

Table 2.42 - Frequency of use SUDOC Catalogue

How often do you use SUDOC Catalogue?	**Number of answers**	**Percentage**
Very often	35	11,04%
Often	56	17,67%
Sometimes	94	29,65%
Never	28	8,83%
Total	317	100,00%
Skipped the question	104	32,81%

2.6.2.2.4 Use of the A-to-Z list

The University of Lille 1 and Lille 3 offer access to e-journals via an EBSCO product, A-to-Z list[43]. This is a web-based tool that provides the single, comprehensive list of the library's e-journals. The University of Lille 2 provides a Book-Line ver. 2.6 software. This is an integrated search tool

[43] Available at : http://www2.ebsco.com/en-us/ProductsServices/atoz/Pages/index.aspx [Retrieved: 31 May 2013].

based on Z39.50 protocol, created by French company Archimed[44]. The interface of these two tools does not differ in principle.

Two questions in the questionnaire concerned the use of that tool by doctoral students. Table 43 shows the responses on the question about general knowledge of the A-to-Z list: 107 respondents (33,75%) said they know the product and they know what it serves for, and 24 students (7,57%) answered they do not know the A-to-Z list. The big number of respondents – 186 (58,68%) skipped this question. It might be assumed that a big part of respondents who skipped the question did not understand it or they were not aware that this question concerned the alphabetical list of e-journals that they have at their disposal at the libraries website.

Table 2.43 - General knowledge of the A-to-Z list of the e-journals

Do you know the A-to-Z list? Do you know what does it serve for?	**Number of answers**	**Percentage**
Yes	107	33,75%
No	24	7,57%
Total	317	100,00%
Skipped the question	186	58,68%

Table 44 presents the answers related to the question on the use of the A-to-Z list for searching e-journals. It was the contingency question - in the previous question about the general knowledge of the A-to-Z list it was indicated that those who do not know the service can skip this question. That is why the total number of answers received to this question was 160. However, the big number (106) of those 186 respondents who skipped the previous question gave their indication on the frequency of using A-to-Z list. This is why the total number of answers on this question is bigger than on the previous one. The distribution of responses was as follows: 79 respondents (24,92%) answered they use the A-to-Z list sometimes; 66 (20,82%) – often; 65 students (20,50%) said they use it very often, and 35 (11,04%) – never. 72 respondents (22,71%) skipped the question. Eight of those

[44] Available at: http://www.archimed.fr/ [Retrieved: 31 May 2013].

who responded "never" do not use the A-to-Z List at all and they answered "no" in the previous question, 24 were those who skipped the previous question and 3 were those who answered that they know A-to-Z list, but they never use it.

Table 2.44 - Use of the A-to-Z list for e-journals searching

Do you use the A-to-Z list to search electronic journals?	**Number of answers**	**Percentage**
Very often	65	20,50%
Often	66	20,82%
Sometimes	79	24,92%
Never	35	11,04%
Total	317	100,00%
Skipped the question	72	22,71%

2.6.2.3 Library instructions

The other set of questions was related to the library instruction and users' opinions about the offer of those trainings provided by the Universities of Lille libraries as well as expectations connected with the trainings offer.

2.6.2.3.1 Participation in the library instruction

The majority of respondents – 140 (44,16%) answered they did not participate in a library instruction and 76 students (23,97%) said they did. The big number of respondents (101 – 31,86%) skipped this question. As they skipped the next question as well, it might be assumed that they are in the group that did not participate in any library instruction.

This was the first of the series of contingency questions that were aiming to verify if the services offered by the library are sufficient in the students' opinion.

Table 2.45 - Participation in a library instruction

Have you been already participating in the library training?	**Number of answers**	**Percentage**
Yes	76	23,97%
No	140	44,16%
Total	317	100,00%
Skipped the question	101	31,86%

The Universities of Lille libraries suggest several types and forms of library instructions. Lille 1 offers library visits for the 1st year students (often called in LIS literature "library orientation") as well as a 2-hour course of documentary searching (fr. *recherche documentaire*). For the students of the 2nd and the 3rd year of bachelor studies – 10-12-hour course of documentary methodology (fr. *méthodologie documentaire*) - within the ECTS. And for master and doctoral students as well as for all interested faculty – instruction in terms of access to electronic resources related to their field of studies. Lille 2 offers an introductory instruction to documentary searching for the 1st year students. For master and doctoral students an advanced instruction in terms of specialized resources (fr. *formation approfondie aux ressources documentaires spécialisées*) is suggested. For doctoral students the library offers an additional instruction in terms of access to electronic resources as well as bibliography management tools. Lille 3 offers a course of documentary methodology within the ECTS for the 1st year students. Also, on demand of faculty, librarians can organize a specialized instruction for master students. Lille 3 library offers also an online course for all three cycles of studies, created on Moodle platform. E-learning course for doctoral students consists of five parts and is completed with the evaluation form. There is also an offer called "thematic workshop" (fr. *atelier thématique*),

offering master and doctoral students a two and a half hour instruction in use of bibliographic management system Zotero. In general, Lille 3, comparing to Lille 1 and Lille 2, seems to have the wider offer of library instructions dedicated to doctoral students. Cooperating with University Doctoral School (fr. Ecole Doctorale), it organises a series of instructions that can be awarded with 7 ECTS credits as well. In academic year 2010/2011, library organized four 3-hour training sessions. The elaborated themes were: tools improving research; amelioration of use of specialized databases; access to scientific information on web ; acquisition of advanced competencies in the domain of scientific information on web.

However, as shown in Table 45, only 23,97% of respondents participated in library instruction. And the majority of students represented Social Science, means they study at University of Lille 3, having the widest offer of trainings, including the e-learning course. Table 46 shows that 74 (23,34%) students from three described above universities participated in the traditional instruction in the library building, while only 3 (0,95%) respondents took the online course. As many as 240 persons skipped the question, but it was allowed as it was the contingency question, so if in the question about participation in the library instruction the answer was “no”, the respondent could omit the next question. The positive answer on the question about participation in the library instruction was given by 76 respondents, while on the type of instruction there were 77 answers. It is difficult to explain why one person more gave the answer. Still, the number of 240 respondents who skipped the question is thought-provoking.

The low participation in the library instruction was indicated also in another French study conducted among doctoral students in 2008 in Rennes (Urfist de Rennes & SCD de l’UBO, 2008). In that study only 32,50% of respondents declared the participation in library instruction. Thus, this issue can be perceived in a wider, national context.

Table 2.46 - Type of library instruction

Was it (the library training):	**Number of answers**	**Percentage**
A group training in the library building?	74	23,34%
An e-learning online course?	3	0,95%
Total	317	100,00%
Skipped the question	240	75,71%

2.6.2.3.2 Library instruction and electronic resources

The first of two main interests was to investigate if in the users' opinion the library instruction covered sufficiently the subject of scientific journals (especially the electronic ones) and if the time dedicated to this topic during the training was enough for users to conduct their own research afterwards. For this purpose the set of questions was provided.

Table 47 presents the results of general question whether the access to e-resources was explained during the library instruction. Almost 53% of respondents (167 PhD students) answered "no" while about 24% (77 persons) – "yes". This was the next contingency question, so those who did not participate in the library instruction could skip it. However, within 167 respondents who gave a negative answer, there are persons who did not participated in library instruction, thus they marked "no". The number of students who skipped the question is less as well.

Table 2.47 - Access to electronic resources and library instruction

Was the access to e-resources explained during the library training?	**Number of answers**	**Percentage**
Yes	77	24,29%
No	167	52,68%
Total	317	100,00%
Skipped the question	73	23,03%

Those who answered "no" in the previous question could skip the next one, investigating the users' opinion if the electronic resources issue was explained sufficiently to conduct one's own researches afterwards. For 50 students (15,77%) the library instruction was efficient, for 36 (11,36%) it was not. Again, the big number of respondents, 219 (69,09%) skipped the question. It can be assumed that those who did not participated in any type of instruction.

Table 2.48 - The efficiency of library instruction

Do you think it was explained efficiently for you to use it individually afterwards?	**Number of answers**	**Percentage**
Yes	50	15,77%
No	36	11,36%
Other answer	12	3,79%
Total	317	100,00%
Skipped the question	219	69,09%

However, these questions were not closed-ended and provided the opportunity to leave user's own answer. There were 12 additional opinions (3,79%) left by respondents. The majority, i.e. 8 comments can be described as given by a group of "positive" and "self-confident" users. Respondents highlighted the need of permanent practice, otherwise the skills gained during the instruction (perceived as sufficient and helpful) are quickly forgotten. There were answers like: "to be an independent searcher, one must take part in such instruction. But the most important is to practice afterwards" or "the library instruction was efficient, but it was difficult to start searching myself afterwards". There were also three answers indicating that users in their opinion do not need library instruction to start using e-resources. One of the students wrote "1,5 hour of my teacher's explanations on documentary searching was enough to do it myself" or "I did not participated in the instruction, I learnt all myself" or "I do not need any explanations – it is quite easy to use and one can learn himself". One respondent underlined that e-resources were explained efficiently thanks to the librarian holding the instruction. The second group of answers, consisted of three comments, was rather a "negative" one. The answers given were: "the catalogue of the library is not clear", "there are few journals from my field of study", "no, the instruction was not efficient and I have been studying in Lille for three years". These answers do not touch essential problems, they are rather the expression of overall dissatisfaction. One person wrote that she is signed up for a library instruction that will take place soon.

The next two questions were closed-ended ones and were used to investigate if the library instruction and all kinds of didactic materials offered by the library are sufficient in students' opinion and if the respondents are interested in the additional bibliographical instruction related to use journals for the research work.

Table 49 presents the answers to the questions considering the sufficiency of library instruction and didactic materials. Distribution of responses was

as follows: 127 respondents (40,06%) answered that the instruction and materials are not sufficient while 109 (34,38%) said they are. There were 81 respondents who skipped this question.

Table 2.49 - Sufficiency of library instruction and didactic materials offered by the library

Do the library instructions and training on electronic journals use are sufficient for you?	**Number of answers**	**Percentage**
Yes	109	34,38%
No	127	40,06%
Total	317	100,00%
Skipped the question	81	25,55%

Table 50 shows the number and percentage of students inquired if they are interested in additional bibliographic instruction. There were 186 respondents (58,68%) who answered "yes" while 107 (33,75%) gave a negative answer, and 24 students skipped this question.

Table 2.50 - Additional bibliographic instruction

Would you be interested in some additional bibliographic training on how to use journals for the research work?	**Number of answers**	**Percentage**
Yes	186	58,68%
No	107	33,75%
Total	317	100,00%
Skipped the question	24	7,57%

2.6.2.3.3 The use of scientific journals (both in print and electronic version)

The second main purpose of this research was to investigate if doctoral students read scientific journals, in what purpose and what there are in their opinion the biggest obstacles for not using this source of information. The questionnaire contained the set of five closed-ended, open-ended and multiple-choice questions related to this issue.

Table 51 shows the answers distribution to the question about the frequency of reading journals from respondents' field of studies: 168 students (53,00%) answered they read them very often, 80 persons (25,24%) said "often" while 48 respondents (15,14%) stated "sometimes" and four of them indicated (1,26%) "never". There were 17 respondents who skipped the question.

Table 2.51 - Frequency of scientific journals reading

Do you read scientific journals from your field of studies?	**Number of answers**	**Percentage**
Very often	168	53,00%
Often	80	25,24%
Sometimes	48	15,14%
Never	4	1,26%
Total	317	100,00%
Skipped the question	17	5,36%

The next question (presented in Table 52) was the closed-ended question surveyed the respondents' awareness of online scientific journals. There were 256 students (80,76%) who answered that they are aware of the existence of several thousands of online scientific journals while 43 (13,56%) said they are not. 18 respondents skipped the question.

Table 2.52 - The awareness of the existence of online scientific journals

Are you aware of the existence of several thousands of online scientific journals accessible at the University of Lille?	**Number of answers**	**Percentage**
Yes	256	80,76%
No	43	13,56%
Total	317	100,00%
Skipped the question	18	5,68%

The next issue was to test the use of electronic journals available at the Universities of Lille by the doctoral students. For this purpose the question about the frequency of reading e-journals was provided. Table 53 shows the data obtained: 59 respondents (18,61%) said they read e-journals very often, 69 students (21,77%) answered "often" while 88 persons (27,76%) marked "sometimes" and 48 persons (15,14%) – "never". There were 53 students who skipped this question.

Table 2.53 - Frequency of reading electronic journals

Do you read electronic journals the library provides?	**Number of answers**	**Percentage**
Very often	59	18,61%
Often	69	21,77%
Sometimes	88	27,76%
Never	48	15,14%
Total	317	100,00%
Skipped the question	53	16,72%

The main aims of reading scientific journals by doctoral students were also the subject of investigation. For this purpose three multiple-choice opened questions including three contingency questions were provided. The general question was: "For what purpose do you read scientific journals"? Table 54 represents the detailed data on obtained answers.

Table 2.54 - Purpose of reading scientific journals

For what purpose do you read scientific journals?				**TOTAL**
	Yes	**No**	**Skipped the question**	
1. For preparing your thesis?				***317***
	296	**3**	**18**	
If yes, what will be the estimated number of journal articles cited in your thesis?				
0-9	15			
10-30	29			
31-60	37			
61-100	51			
more than 100	91			
I do not know	31			
Other answer	17			
No answer	2			
Skipped	23			
2. For your classes preparatio?				

		174	**94**	**49**	**317**
If yes, is it your lecturer / tutor who asks you to read certain articles or do you do it of your own will?					
	Recommended by lecturers / tutors	5			
	Own decision of the student	128			
	Both options	38			
	Skipped	3			
3. For other purpose, not related with thesis?					
		215	**73**	**29**	**317**
If yes, is it connected with your study field?					
	Yes	152			
	No	39			
	Sometimes	17			
	Skipped	7			

The results revealed that the majority of students (296 – 93,37%) read scientific journals for the purpose of their thesis, but they do it for their personal use as well (215 positive answers – 67,82%). But still, even the journals read for the personal use are mostly connected with the study field (152 positive answers – 70,69%). If doctoral students read journals to prepare themselves for classes, the majority of respondents (174 – 54,88%) do it of their own will.

Apart from scientific journals, both in print and electronic version, there exists a number of online open electronic archives and repositories where the scientific works can be published and which allow researchers to create their own account and easily upload the papers afterwards. So, it was important

to investigate whether the doctoral students are aware of the existence of these resources and have they already used them. Two questions were asked: "Are you aware of the existence of the open online archives and repositories?" and "Have you already published any of your works in such an archive or repository?" Tables 55 and 56 present the obtained results.

Table 2.55 - Awareness of the existence of the open online archives and repositories

Are you aware of the existence of the open online archives and repositories?	**Number of answers**	**Percentage**
Yes	118	37,22%
No	181	57,10%
Total	317	100,00%
Skipped the question	18	5,68%

The answers presented above show that more than half of the study sample (181 persons) do not know about the existence of repositories, while over 37% (118 persons) have this awareness. There were 18 respondents (5,68%) who skipped this question. However, the number of students who have already published their works in such bases is very low - only 10 students (3,15%) out of 118 who answered "Yes" to the previous question gave positive answer to the question on publishing of their own text in OA repositories (see Table 56).

These results are similar to the recalled earlier study conducted in Rennes (Urfist de Rennes & SCD de l'UBO, 2008), where only 23% of respondents were aware or used open archives and repositories.

Table 2.56 - Publishing in open online archives and repositories

Have you already published any of your works in such an archive or repository?	**Number of answers**	**Percentage**
Yes	10	3,15%
No	152	47,95%
Total	317	100,00%
Skipped the question	155	48,90%

The respondents were asked to write the name of the base in case if they answered positively on the question above. The students indicated the following databases: HAL (Hyper Articles en Ligne) [n=3], TEL (Thèses en Ligne) [n=3] and Archive SIC (Archive Ouvert en Science de l'Information et de la Communication) [n=1]. One respondent indicated « Sane F », however it was impossible to decode this name – probably it is written with some mistakes. Two respondents did not provide any name of repository although they answered positively on the previous question.

The main barriers that can have an influence on limited use of scientific journals by doctoral students were also the subject of investigation. The close-ended questions with 11 multiple-choice answers were asked. The answers on closed-ended questions are presented in Table 57. The answers were received from 282 students, 35 respondents skipped this question. The biggest number of respondents marked the option "No obstacles – I use scientific journals very often" (147 indications). However, the next indicated answer was "I was not trained how to access and use journals" (79 indications) – it can be explained by a big number of respondents who marked in the previous questions that they did not participate in any library instruction. Two optional answers gained the similar score – 48 respondents declared that library does not help them improve their knowledge about

scientific journals and 45 – that the most of scientific journals provided by the library are not related to their field. The next two possible obstacles with the similar score were: for 28 respondents - "there are no librarians who know how to help me in searching scientific journals"; for 24 respondents - "most of scientific journals (especially electronic ones) are in foreign languages". Furthermore, there were less often answers marked, like: "I do not know how to search in bibliographies of journals" (18 indications); "I was not informed about the importance of scientific journals" (16 indications); "the printed journals the library provides are not comfortable in use" (15 indications); "the electronic journals the library provides are complicated in use (10 indications). Two respondents indicated the answer "I read only the articles that my lecturers ask me to read" as the possible obstacle.

Table 2.57 - Obstacles for not using scientific journals

What would be the main obstacles for not using scientific journals or rarely using them for meeting your information needs?	**Number of answers**
No obstacles – I use scientific journals very often	147
I was not trained how to access and use journals	79
The library does not help me improve my knowledge about scientific journals	48
Most of scientific journals provided by the library are not related to my field	45
There are no librarians who know how to help me in searching scientific journals	28
Most of scientific journals (especially electronic ones) are in foreign languages	24
I do not know how to search in bibliographies of journals	18
I was not informed about the importance of scientific journals	16
The printed journals the library provides are not comfortable in use	15
The electronic journals the library provides are complicated in use	10

I read only the articles that my lecturers ask me to read	2
Total	467
Skipped the question	35

As it was written before, the majority of scientific journals, especially those available electronically, offer the content in English. In Table 38 the results of respondents' self-evaluation of their proficiency in English was presented. As it was already emphasized in comments to data on the use of scientific journals by PhD students at the University of Warsaw, not in all fields of research the knowledge of English is crucial for access to results of international researches. Besides, there is certain content offered in foreign languages other than English and the intention was also to investigate what other languages are known by doctoral students. The data presented in Table 58 show the very wide range of languages. Comparing to Poland, in France the number of foreign doctoral students is much bigger. For example in academic year 2010/2011, only at the University of Lille 3 there were 27,1% doctoral students coming from abroad. Thus, some students specified that certain foreign languages are in fact their mother tongues. This explains also the fact that some persons marked French as a foreign language – it can be assumed that these were foreign students who did so. In total, there were 203 students who responded to this question, 114 skipped it.

Table 2.58 - The knowledge of other foreign languages

What other foreign language(s) do you know?	**No. of respondents declaring knowledge of this language**
German	81
Spanish	77
Italian	33
Arabic	23

French	20
Latin	8
Portuguese	6
Chinese, Romanian	5
Ancient Greek, Modern Greek, Japanese	4
Dutch, Russian	3
Czech	2
Albanian, Hungarian, Lebanese, Polish, Turkish	1
None	14
Mother tongue: Arabic, Czech, Greek, Hungarian, Italian, Polish, Romanian, Russian	10

2.6.2.4 The field of study and different aspects of the use of scientific journals variables

As it was said previously, out of 317 respondents, 121 respondents represented Social Sciences, 99 – Pure Sciences, 58 – Humanities and 15 – Applied Sciences (24 respondents did not indicate the field of study). The bivariate analysis with two variables was conducted: dependent and independent one in order to see what is the relationship between the field of study and the aspects related to the use of scientific journals among doctoral students at the University of Lille. The results of this analysis are presented in this part of the dissertation in six contingency tables.

2.6.2.4.1 Reading of scientific journals and the field of study

This question was asked to examine if doctoral students read in general the scientific journals from their field of study. That is why the question did not indicate any specific form of journals (like printed or electronic). Three

respondents, one of Humanities, one of Pure Sciences, and one of Social Sciences declared "never". The majority of students answered they read scientific journals "very often". Out of 167 answers, 68 (40,72%) came from the representatives of Social Sciences, 55 (32,93%) – Pure Sciences, 27 (16,17%) – Humanites, and 2 (1,20%) – from Applied Sciences. However, the indication "often" also gained a high score. Out of 78 respondents who marked this option, 30 (38,46%) came from Pure Sciences, 26 (33,33%) – from Social Sciences, 17 (21,79%) – from Humanities and 2 (2,56%) represented Applied Sciences. The answer "sometimes" scored 51 answers, out of which 26 (50,98%) came from Social Sciences, 12 (23,53%) – Pure Sciences, 11 (21,57%) – Humanities and 1 (1,96%) – from Applied Sciences students. There were also 10 indications provided by respondents who did not declare their field of studies. 5 out of 10 answered "very often", 3 – "often", 1 – "sometimes" and 1 – "never". The result gave the positive image of doctoral students at the University of Lille, the scientific journals are read by them regularly. The detailed results are presented in Table 59.

Table 2.59 - Reading of scientific journals related to the field of study

Field of study	**Do you read scientific journals from your field of studies?**					
	Very often	**Often**	**Sometimes**	**Never**	**No answer**	**Total**
Applied Sciences	12	2	1	0		15
Humanities	27	17	11	1	2	58
Pure Sciences	55	30	12	1	1	99
Social Sciences	68	26	26	1		121
Not indicated	5	3	1	1		10
Skipped						14
	167	78	51	4	3	**317**

2.6.2.4.2 Reading of e-journals provided by the library and the field of study

The next variable to examine was the relationship between the field of research and the frequency of reading the electronic journals. Once it was discovered that students in general read regularly the scientific journals, it was essential to detail if the given answers are related to printed or electronic journals and if there is a significant relationship between these two variables. Thus, the question about e-journals was asked. The data are presented in Table 60. In this case, the number of "never" answers scored 47, out of which 19 (40,43%) was given by students of Pure Sciences, 12 (25,53%) – Humanities, 13 (27,66%) – Social Sciences, and 1 (2,13%) - Applied Sciences. The options with the highest score were "often" and "sometimes". Out of 87 respondents who said "sometimes", 34 (39,08%) answers came from Social Sciences, 28 answers (32,18%) were given by the representatives of Pure Sciences, 22 (25,58%) – Humanities, and 2 (2,30%) – Applied Sciences. While "often" option was marked by 69 students, out of whom 34 (49,27%) came from Social Sciences, 21 (30,43%) – from Pure Sciences, 10 (14,49%) – from Humanities, and 2 (2,89%) – from Applied Sciences. The answer "very often" was indicated by 61 respondents, out of whom 29 (47,54%) were the Social Sciences students, 18 (29,50%) – Pure Sciences, 7 (11,47%) – Applied Sciences and 6 (9,83%) – Humanities. There were 18 respondents who skipped this question. The results show that there are still students who do not read electronic journals at all.

Table 2.60 - Relationship between reading of e-journals provided by the library and the field of study

Field of study	**Do you read electronic journals that library provides?**					
	Very often	**Often**	**Sometimes**	**Never**	**No answer**	**Total**
Applied Sciences	7	2	2	1	3	15
Humanities	6	10	22	12	8	58
Pure Sciences	18	21	28	19	13	99

Social Sciences	29	34	34	13	11	121
Not indicated	1	2	1	2		6
Skipped						18
	61	69	87	47	35	**317**

2.6.2.4.3 Barriers and obstacles for not using or limited usage of scientific journals and the field of study

Results presented in the contingency Table 61 show the bivariate analysis of the relationship between the field of study and the main barriers that limit the use of scientific journals by doctoral students. The aim was to determine the types of obstacles that are the most important for students and the most significant for particular field of study. There were 11 options to choose in this multiple-choice question. The first option was "No obstacles – I use scientific journals very often" and it was marked by 147 students[45] (46,37%), out of whom 54 (36,73%) represented Pure Sciences, 49 (33,33%) – Social Sciences, 31 (21,08%) – Humanities and 9 (6,12%) – Applied Sciences. These results confirm the earlier observed tendency that the students of Pure Sciences and Social Sciences use the scientific journals more frequently than the others. The rest of suggested obstacles are divided into four groups that can be named: "library instruction", "library acquisition policy", "library services" and "users' attitude".

Obstacles related to library instruction.

1. "I was not trained how to access and use journals". There were 79 indications (24,92%), out of which 32 (40,51%) represented Social Sciences, 28 (35,44%) – Pure Sciences, 13 (16,46%) – Humanities, 5 (6,32%) – Applied Sciences and 1 answer (1,27%) was given without indicating the field of study. This result shows the correlation between lower use of journals and lack of library instruction among the Social Sciences and Pure Sciences PhD students.

[45] Out of the whole sample [N=317].

2. “The library does not help me improve my knowledge about scientific journals”. 48 respondents (15,14%) indicated this obstacle. There were 20 (41,67%) answers of Social Sciences students and 18 (37,50%) of Pure Sciences ones. This option was marked by 8 (16,67%) Humanities students and 2 (4,17%) Applied Sciences ones. This result shows that some of students feel that library help is not sufficient in the domain of supporting the use of scientific journals.

3. “I do not know how to search in journals bibliographies”. Out of 18 respondents (5,68%), the biggest numbers - 8 (44,44%) represented Social Sciences, and Pure Sciences – 5 (27,78%). There were 3 representatives of Applied Sciences (16,67%). For doctoral students of Humanities where the journals bibliographies are a very important source of information it was not an important obstacle – only 2 respondents (11,11%) marked this option. And the overall number of Humanities representatives was 58 (see Table 1).

4. “I was not informed about the importance of scientific journals”. Out of 16 respondents (5,05%) who indicated this obstacle, the majority – 9 (56,25%) represented Social Sciences, 3 (18,75%) – Pure Sciences, 2 (12,50%) – Humanities, 1 (6,25%) – Applied Sciences. One respondent (6,25%) did not provide her/his field of study.

Obstacles related to library acquisition policy.

1. “Most of the scientific journals provided by the library are not related to my field”. The total number of responses received on this statement was 45 (14,19%), out of 20 (44,44%) was given by the Social Sciences students, 12 (26,67%) by the Humanities and 11 (24,44%) by the Pure Sciences ones. The score of Pure Sciences students can be surprising, especially in the light of the common opinion that the most of scientific journals, especially the electronic and foreign ones concentrates on Pure Sciences, Technology and Medicine. Probably it is not the problem of the field, but of the language – the majority of Pure Sciences students estimated their English proficiency as average or

good (see Table 64) and it might be not sufficient for easy reading of scientific publications. As for Applied Sciences – only 1 person (2,22%) from overall number of representatives of this domain (n=15, see Table 1), marked this answer what in this question. One respondent did not provide the field of their study.

Obstacles related to library services.

1. "The printed journals the library provides are not comfortable in usage". This statement scored 15 responses (4,73%). The biggest number of responses, 8 (53,33%) was given by the Pure Sciences students, while 4 (26,67%) Social Sciences students and 3 (20%) Humanities ones marked this option. As for Applied Sciences – no respondent chose this obstacle. The result confirm earlier conclusion that the Pure Sciences students quite flexibly adopted new technology, i.e. journals in electronic format and they mostly use this format of periodicals, seeing it as more comfortable.

2. "There are no librarians who know how to help me in searching scientific journals (print and electronic)". This option was marked 28 times (8,83%), out of which 11 (39,29%) came from the Social Sciences students, 9 (32,14%) – from the Pure Sciences students, 7 (25%) – from the Humanities ones and 1 (3,57%) – from the representative of Applied Sciences. These results show that especially the Social Sciences doctoral students are not satisfied enough with the library staff's help in the domain of use of scientific journals and it can be a factor causing the lower use of this source of information among the students. On the other hand, the biggest number of students who did not participated in any library instruction comes right from this field of research. Thus, it can be assumed that Social Sciences students are just not aware what librarians and library can offer them.

3. “The electronic journals the library provides are not clear and easy to use”. Out of 10 respondents (3,15%) who marked this answer, 6 (60%) represented Social Sciences, 2 (20%) Humanities, and 2 (20%) – Pure Sciences.

Obstacles related to user’s attitude.

1. “Most of scientific journals (especially electronic ones) are in foreign languages”. This obstacle was marked by 24 respondents (7,57%), out of whom 10 (4,17%) represented Social Sciences,7 (29,17%) Pure Sciences, 6 (25%) were the representatives of Humanities, and one person (4,17%) – the Applied Sciences. Comparing these responses with the data presented in the Table 38 (Respondents’ English language proficiency) and the Table 64 (Relationship between the English proficiency and the field of study) these results confirm that the average self-perceived English proficiency level among doctoral students at the University of Lille is sufficient and they do not see the significant obstacle in the fact that the majority of scientific journals are published in English. Comparing the number of responses received to this question (n=24) with the overall number of the survey respondents (N=317), it gives only 7,60% of students who consider it as a barrier in access to scientific journals.

2. “I read only the articles that my lecturers ask me to read”. This option was marked only by two students (0,63%): one (50%) was the representative of Social Sciences, the second one (50%) – the Pure Sciences. Comparing these results (n=2) with the overall number of the survey respondents (N=317), it gives hardly 0,63% of all students who participated in the survey.

Table 2.61 - Relationship between barriers and obstacles for not using or the limited use of scientific journals and the field of study

What would be the main obstacles for not using scientific journals or rarely using them for your information needs?	**Applied Sciences**	**Humanities**	**Pure Sciences**	**Social Sciences**	**Field of study not given**	**Total n (%)**
No obstacles – I use scientific journals very often	9	31	54	49	4	147 (46,37%)
I was not trained how to access and use journals	5	13	28	32	1	79 (24,92%)
The library does not help me improve my knowledge about scientific journals	2	8	18	20		48 (15,14%)
Most of the scientific journals provided by the library are not related to my field	1	12	11	20	1	45 (14,19%)
Lack of librarians well who know to help me in searching scientific	1	7	9	11	0	28 (8,83%)

journals (print and electronic)						
Most of scientific journals (especially electronic ones) are in foreign languages	1	6	7	10	0	24 (7,57%)
I do not know how to search in journals bibliographies	3	2	5	8	0	18 (5,68%)
I was not informed about the importance of scientific journals	1	2	3	9	1	16 (5,05%)
The printed journals the library provides are not comfortable in usage	0	3	8	4	0	15 (4,73%)
The electronic journals the library provides are not clear and easy to use	0	2	2	6		10 (3,15%)
I read only the articles that my lecturers ask me to read	0	0	1	1	0	2 (0,63%)
No answer		6	5	6	18	35
Total	23	92	151	176	25	467

2.6.2.4.4 Awareness of the existence of the online archives and repositories and the field of study

The results presented in details in Table 62 show that not all doctoral students know that open online archives and repositories exist. In all of fields of study represented in this survey, the students who are aware are rather a minority. Out of 15 Applied Sciences students, 8 (53,33%) are aware, while 7 (46,67%) are not. 29 (50%) of Humanities students know that archives and repositories exist, while 28 (48,28%) do not. As for Social Sciences – 53 (43,80%) respondents confirmed their awareness and 68 (56,20%) did not. The biggest discrepancy is the one that concerns Pure Sciences students – 27 (27,27%) of them are aware of the existence of the open online archives and repositories, while 72 (72,73%) are not.

Table 2.62 - Relationship between the awareness of the existence of the online archives and repositories and the field of study

Field of study	**Are you aware of the existence of the open online archives and repositories?**			
	Yes	**No**	**No answer**	**Total**
Applied Sciences	8	7		15
Humanities	29	28	1	58
Pure Sciences	27	72		99
Social Sciences	53	68		121
Field of study not indicated	4	2		6
Skipped				18
	121	177	1	317

2.6.2.4.5 An interest in additional bibliographic instruction on scientific journals and the field of study

The results presented in the contingency Table 63 show that doctoral students in general are interested in additional library instruction and interested students are in the majority. Out of 15 Applied Sciences students, 8 (53,33%) are interested in such instruction, while 6 (40%) is not. One student skipped the question. 30 (51,72%) of Humanities students would like to have an additional instruction, while 26 (44,83%) would not. Two respondents skipped the question As related to Social Sciences – 77 (63,64%) respondents express this willing and 40 (33,06%) do not. Four skipped this question. 63 students of Pure Sciences (63,64%) are interested in additional library instruction, while 36 (36,36%) are not. There are 5 respondents who are interested and one who is not, but they did not indicate the field of studies.

Table 2.63 - Relationship between interests in additional bibliographic instruction on scientific journals and the field of study

Field of study	**Would you be interested in some additional bibliographical instruction on how to use the journals for the research work?**			
	Yes	**No**	**No answer**	**Total**
Applied Sciences	8	6	1	15
Humanities	30	26	2	58
Pure Sciences	63	36		99
Social Sciences	77	40	4	121
Field of study not indicated	5	1		6
Skipped				18
	183	109	7	317

2.6.2.4.6. The English self-perceived proficiency and the field of study

As it was presented in Table 38, the majority of respondents described their English proficiency as "good" (n=103) or "average" (n=135). The option "very good" was indicated by 35 students and "poor" by 21. No one marked the option "none", however 23 respondents skipped this question. Thus, the next step was to examine the relationship between the English level proficiency and the field of study. Being aware that the majority of scientific journals, especially the electronic ones is published in English, the aim was to investigate whether the proficiency level of this language affects significantly the use of journals. In this case the answers "very good" and "good" are the most important, as it can be assumed that students that declared fluency in English can be independent readers of journals published in English. As a result, the obtained data showed that the number of respondents who perceive their English proficiency as "very good" is not big and there is not a large percentage difference between "very good" and "good" or "average" level between the representatives of four field of study. As for the relationship between the "very good" and "good" answers and the total number of representatives of the given field of study, there were 53 (43,80%) coming from the Social Sciences students, 46 (46,46%) – Pure Sciences, 32 (55,17%) – Humanities and 5 (33,33%) – Applied Sciences. This shows that in the case of each of four fields of study examined here, only Humanities students scored more than 50% in the self-evaluation their English proficiency at a high level. Thus, insufficient knowledge of English might be some obstacle against the use of scientific journals published in English, but also against publishing her/his own scientific work in English.

Table 2.64 - Relationship between the English self-perceived proficiency and the field of study

Field of study	What is your English language proficiency?					
	Very good	Good	Average	Poor	No answer	Total
Applied Sciences	2	3	10			15
Humanities	8	24	24	2		58
Pure Sciences	11	35	48	5		99
Social Sciences	15	38	53	15		121
Field of study not indicated		1				1
Skipped						23
	36	101	135	22	0	317

2.7 Detailed conclusions and recommendations of this part of study

The purpose of this study was to determine the extent and the factors affecting the use of scientific journals among the doctoral students at the University of Warsaw and the Universities of Lille as well as their needs related to holdings and services offered by the libraries of these universities. The general conclusions drawn from the results show that doctoral students willingly read scientific journals both in print and electronic formats. In this case the hypothesis about not sufficient use of scientific journals was not fully confirmed. It means that doctoral students read journals and in general perceive it as the natural activity during their research. However, they are aware, and their participation in this survey increased that awareness, that they could use this source of information in more extensive and more conscious way.

2.7.1 University of Warsaw – conclusions

The majority of Warsaw doctoral students use library online catalogues, but only its simple searching option, although the advanced one is much more useful, while doing the complex queries (see Table 7 and 8). Without this knowledge, they use the catalogue only as a tool for searching particular titles or authors. The majority of respondents do not know the NUKAT Catalogue, which is the major Polish source of bibliographic data, including, among others, the holdings of the biggest academic and research libraries in Poland (see Table 9 and 10). This is the best source for searching the books to order by Inter Library Loan (ILL) services if they are not available in the one's university library. The students, although they participated in the library instruction, are aware that the one-time training does not ensure the sufficient knowledge on the use of scientific journals (especially the electronic ones) and the efficient use of them in research. The study also revealed that in the majority of cases the access to e-resources was not explained during the training. In the comments and open space sections of the survey questionnaire some respondents left their opinions, suggesting very clearly that this survey made them realise the variety of resources and tools offered by the library about which they had not any knowledge before. One of the students, referring to the training in which she participated at Oxford University, said that it was extremely useful. There were no respondent who said that any of instruction or didactic materials offered by the University of Warsaw are useful. In the contrary – the majority of respondents answered that the library instructions and trainings on how to use electronic journals are not sufficient (see Table 18). That is why over half of the responding students was interested in the additional library instruction (see Table 19). And here, the research that at the beginning aimed at investigation the use of scientific journals, turned toward the problems with insufficient library instruction.

On the other hand, doctoral students are aware of the existence of several thousands online journals accessible at the University of Warsaw and they often read the e-journals for the purpose of their thesis, for classes preparation, and for personal use (see Table 21, 22 and 23). However, they meet barriers among which is the lack of sufficient training concerning access and use of journals. This is considered to be the biggest problem in the respondents' opinion. They are also complaining that the most of scientific journals provided by the library are not related to their field of study and that electronic journals are complicated in use while the print ones are considered as uncomfortable in use. There are also three barriers suggested in the questionnaire that gained the high percentage score. They are related to library services: 1. the library does not help me improve my knowledge about scientific journals; 2. I do not know how to search in bibliographies of journals; and 3. there are no librarians who know how to help me in searching scientific journals (see Table 26). Here, again, the importance of IL is exposed. These results, as well as all mentioned before and connected with the library offer will be the basis for further recommendations, implications, and further works directions.

One of the hypotheses to check was whether the insufficient use of scientific journals might be linked with the lack of knowledge of foreign languages. Two questions in the questionnaire were related to this issue. The first one was about proficiency in English, as the majority of scientific journals, especially the electronic ones, are published in this language. The results revealed that it should not be any obstacle for students – more than a half declared the knowledge of English at very good or good level (see Table 6). The second question concerned the level of other foreign languages. Here, the dominant one was German, then French, Russian and Spanish. Even taking into consideration the fact that some of the respondents could be the PhD students at the Faculty of Modern Languages, these results still show that nowadays doctoral students know more than one foreign language (see Table 27). There was no respondent who declared not to know some other

language than English and there was no respondent who declared that does not know English.

The aim of this study was also to investigate the relationship between use of scientific journals and the field of study. In general, it can be concluded that the Pure Sciences students seem to be more flexible in adopting new technologies. They are using scientific journals more often, they are the biggest group which in the case of question about the obstacles marked the option "no obstacles – I use scientific journals very often". The respondents who have already published their works in open online repositories or archives belong to this group, too. This group is also the least interested in any additional bibliographic instruction. These results describe the existing situation in the current acquisition policy at the University of Warsaw: the scientific journals in subject of Pure Sciences dominate (both in electronic and print format). In the case of printed journals it is because this profile of editing is very wide in Poland and there are many new titles published every day. As the University of Warsaw Library receives the legal deposit of all Polish publications[46], the number of journals is increasing quickly and the dominance of journals dedicated to broadly defined Pure Sciences is visible. As for electronic journals the majority of databases offered at the University of Warsaw have the content concentrated on Pure Sciences. That is why the relatively big number of respondents who marked as an obstacle the option "most of the scientific journals provided by the library are not related to my field" came from the Humanities. The reason of this situation is caused by the fact that the faculty related to Humanities and Social Sciences are participating in the subscription of databases on the lowest level, they do not contribute in purchasing on the same level as Pure and Applied Sciences do, hence, the percentage of databases for Humanities is lower. However, since 2010 the University of Warsaw Library has been making attempt to change this situation and to increase the number of resources dedicated to

[46] It is regulated by the legal act published in Dziennik Ustaw (Journal of Laws) 1996, No. 152, item 722. http://www.abc.com.pl/serwis/du/1996/0722.htm [Retrieved: 31 May 2013].

broadly defined Humanities and Social Sciences. This survey revealed and confirmed that this undertaking in the domain of acquisition policy is needed.

2.7.2 University of Warsaw – recommendations

This study can be beneficial both for the academics under supervision of whom doctoral students are conducting their research as well as for the University of Warsaw Library and forty-nine departmental and institutional libraries functioning within the University.

On the faculties, students should be encouraged by their lecturers to read scientific journals, use the databases provided at the University and participate in the instruction offered by the library. Students should also know that they can, by their faculty administration, suggest the publications to purchase by the library – both in print and electronic format, both Polish and foreign ones. Students should be motivated to use electronic resources as the modern and very efficient source of scientific information that could help them to success in research. Also the project of University of Warsaw open repository (pl. Repozytorium UW)[47] should be promoted as a way of publishing the articles in Open Access domain. For now, all doctoral students are obliged to depot their thesis together with reviews at least ten days before the viva.

However, to achieve these goals the cooperation between the faculties and the library is essential. The library should wider promote scientific journals, underline their importance and facilitate the access as much as it is possible. The initial one-time library instruction at the beginning of bachelor studies is not sufficient and the permanent perfection courses are necessary to let the students to get the biggest value from the resources offered by the library. These courses should be addressed to the particular groups of doctoral students (regarding their field of study), so the content should be precisely elaborated and adapted to their information needs. The instruction should be

[47] Available at : http://depotuw.ceon.pl [rRetrieved: 31 May 2013].

aimed at resources and services, not at the library as a building storing books. Thus, they do not have to take place in the library building, but can be accessed virtually, on the mentioned early Moodle platform or via the nowadays more and more popular webinars platform[48]. The form of webinar gives the possibility of active participation and seems to be a very efficient tool.

Once the training programmes will be prepared, the library should find the way to reach to the biggest possible group of users to promote the courses and regularly inform students of their availability. Library website, university media, Web 2.0 tools, but first of all a developed cooperation with faculties would be the best tools and methods of such promotion.

However, the most crucial issue is to prepare the library staff. Trainings for trainers are the basic methods of permanent librarians' education abroad. In Poland this problem still seems to be neglected and in the result, as this study revealed, the users notice that there are not enough librarians who can help them sufficiently in their research, especially in the domain of electronic resources. Without excellent specialists, the library will not be able to cope with this task. So far, there was only one IL Training for Trainers organized by IL PLA Committee in September 2011.

2.7.3 Universities of Lille – conclusions

The majority of Lille doctoral students use library online catalogues, and not only its simple searching option, but also the advanced one what is important for deeper and more relevant searching (see Table 39 and 40). The majority of respondents know the Sudoc Catalogue, which is the major French source of bibliographic data, including the holdings of the biggest academic and research libraries in France (see Table 41 and 42). This is the best source for searching the books to order by Inter Library Loan (ILL) services if they are not available in the one's university library and French

[48] The University of Warsaw Library in August 2010 purchased the license for the tool Netviewer Meet Business Edition http://www.netviewer.com/en/ [Retrieved: 31 May 2010].

students seem to be aware of that use Sudoc for this purpose. The biggest problem revealed by this survey was that the students do not participate in library instruction, although the offer of the university libraries is quite developed. Only 23,97% of respondents declared their participation in the library instruction. Thus, it can be assumed that the majority is self-learners. Moreover, they seem to be aware of their lack of the sufficient knowledge on the use of scientific journals – 58,68% declared the willingness of participation in an additional instruction. However, in the case when they had not participated in the basic instruction, this statement can be interpreted as the will of participation in any instruction. The reason of such situation might be insufficient promotion of library instructions among students. In this situation the key-point is not to reconsider the instruction content, but reconsider the way of promoting the instruction itself. To convince students, especially doctoral ones that the educational offer of libraries is really useful and can be beneficial for their research work. Because the study revealed that the IL trainings are well prepared and conducted as generally the respondents are satisfied with the content. All students who took part in the instruction declared that the access to e-resources was explained during the training and many of them think that the instruction is sufficient for further independent research work (see Table 48).

On the other hand, the students are convinced that they know how to use scientific journals. On the comments and open space sections of the survey questionnaire some respondents wrote down this kind of opinions. They know the AtoZ list of electronic journals, they use OPACs, so they estimate that they know the tools and have sufficient skills for being an independent library user. The majority reads scientific journals for the purpose of their thesis, for preparation for classes, and for personal use (see Table 52, 53 and 54). This image of students sought from the study conducted at the Universities of Lille confirms the users' attitude presented in the book "Du lecteur à l'usager : ethnographie d'une bibliothèque universitaire" (En. "From the reader to the user: ethnography of university library") (Roselli &

Perrenoud, 2010). The University of Toulouse-Le Mirail Library wanted to do a deep ethnographical and not only statistical research among its users. In the effect, the book containing 29 portraits of library users was published. One of presented user is Didier, an assistant professor in sociology with 10 years of experience (pp.231-239). He is a user "beyond the library building", using e-resources remotely quite regularly. The more publication he can find online, the less often he visits library. He is coming to the library building only to borrow books either available on site or ordered by inter-library loan. He treats library only as a storage of books, he is aware that library organizes several types of instructions, that would be very effective either for him or for is students, however he is not interested in deepening his knowledge. Besides, he wants to believe that other faculty will explain to students how to do a research or students will learn it themselves. Asking about his wiliness to take part in some instruction, he answers "no, I am not planning to participate in any training". Didier is convinced that he can manage without instruction as he is able to search in many bibliographic databases using the search engines. In his opinion the most important is to manage his field of research and he feels he manages it.

The students from Lille, however, meet some barriers in using scientific journals. And paradoxically, these barriers are strongly related to the lack of library instruction. The biggest barrier in their opinion is the fact that they are not trained to access and use journals. They are also complaining that the library does not help them improve their knowledge about scientific journals, while hardly 24% of respondents profited from the libraries educational offer. The barrier suggesting that there are no librarians who know how to help in searching scientific journals was also frequently indicated. As well as the indication that most of scientific journals provided by the library are not related to the respondents' field of study.

One of the hypotheses to check was if not sufficient use of scientific journals might be caused by low proficiency of foreign languages. Two questions in the questionnaire were related to this issue. The first one was about

proficiency in English, as the majority of scientific journals, especially the electronic ones, are published in this language. The results revealed that it can be an obstacle for students – only 11,04% of respondents declared the knowledge of English at very good and 32,49% at good level (see Table 38). The second question concerned the level of other foreign languages. Here, the dominant one was German, then Spanish, and Italian, but there were respondents who marked that they do not know any other foreign language (see Table 58). Taking into consideration the fact that in France there are many foreign students, so their mother tongue is also a foreign language from the French point of view as well as the fact that 35% of respondents skipped this question in the survey, the foreign languages proficiency among Universities of Lille doctoral students is rather average. And this can be an obstacle, especially that, as Catts and Lau (2008) write:

> Language is also a key factor in access to information. Those who speak English have access to a wider pool of information in most fields of knowledge due to the dominance of English, especially in electronic information databases (p. 23).

Doctoral School of University of Lille 3 (SHS – Human and Social Sciences) has started the undertakings aiming at ameliorate the level of foreign languages proficiency among students. In December 2011 doctoral students were asked to fill in the survey consisting of ten questions. The goal was to know the students' opinion on the importance of learning foreign languages to communicate in scientific purposes (papers, conferences) and to elaborate the adequate programme. The Doctoral School suggested the choice between four languages: English, German, Spanish, and Chinese. In January 2013 the workshops in scientific English training have began. They aim at familiarizing doctoral students with English academic vocabulary useful for conference representations and papers writing.

The next aim of this research was also to investigate the relationship between the use of scientific journals and the field of study of doctoral students. In general it can be concluded that the Pure Sciences students seem to be more flexible in adopting new technologies. They are using electronic scientific journals more often, they are the biggest group which in the question about obstacles marked the option "no obstacles – I use scientific journals very often". However, this is not the group that is aware of existing online archives and repositories. The Humanities, Applied Sciences, and Social Sciences students are more aware; and among this group there are the respondents who have already published their works in open online repositories or archive. Also, the Pure Sciences and Social Sciences students are the most interested in the additional bibliographic instruction. The majority of Pure Sciences faculties is located at the University of Lille 1 and Social Sciences ones – at the University of Lille 3. This can be the indication for the university libraries to strengthen the promotion of IL instruction. Especially that the relatively big number of respondents who marked as an obstacle the options "I was not trained how to access and use journals" and "The library does not help me improve my knowledge about scientific journals" came from the Social Sciences and Pure Sciences.

The general remark needed here is the observation of a high rate of skipped question. The respondents omitted the questions, thus it was difficult to analyze the data in reliable way. On the other hand, this is the phenomena well known in social research and discussed in literature, especially in the case of online surveys.

2.7.4 Universities of Lille – recommendation

This study can be beneficial both for the doctoral schools under which scientific and administration tutorial doctoral students are conducting their research, as well as for the University of Lille libraries.

Libraries should increase their efforts to promote the different types of instructions they offer. The study revealed clearly that students are not

aware of the diversity of library trainings that they can participate in. Even though each university library offers various instructions and informs about them on the website, it seems that this information does not get to students. Or, it gets but it is not formulated attractively enough to attire students' attention and to persuade them to attend. Hence, the libraries should reconsider the way of informing about their educational activities.

One of the ways of increasing the awareness and promotion of the library instructions offer is to strengthen the cooperation with the doctoral schools. In some doctoral schools at the Universities of Lille the library instruction is integrated into the doctoral studies curriculum and it is a facultative module awarded ECTS credits. However being facultative and not compulsory, it is still seldom chosen by students.

Also the faculty, theses supervisors, should encourage students to participate in the instruction offered by the library and to be active library users. The term "active" in this context means increasing the contacts with the library instead of remaining the passive user. The study showed that in the opinion of a group of students, libraries do not provide the journals from the students' field of study. However, students should know that they can suggest the publications to purchase by the library – both in print and electronic format, both French and foreign ones.

Also the awareness of online archives and repositories should be increased, especially that in France all doctoral theses are indexed in Sudoc Catalogue and, if an author permits, the full text is available via Sudoc as well. Thus, this is the first step to publish in open repositories and authors should be aware what their rights, advantages and drawbacks. Currently both at the University of Lille 1 and the University of Lille 3 there are projects of creation the Open Access portals for scientific publications, based on HAL. So far, there is no official statement encouraging or obliging the depot.

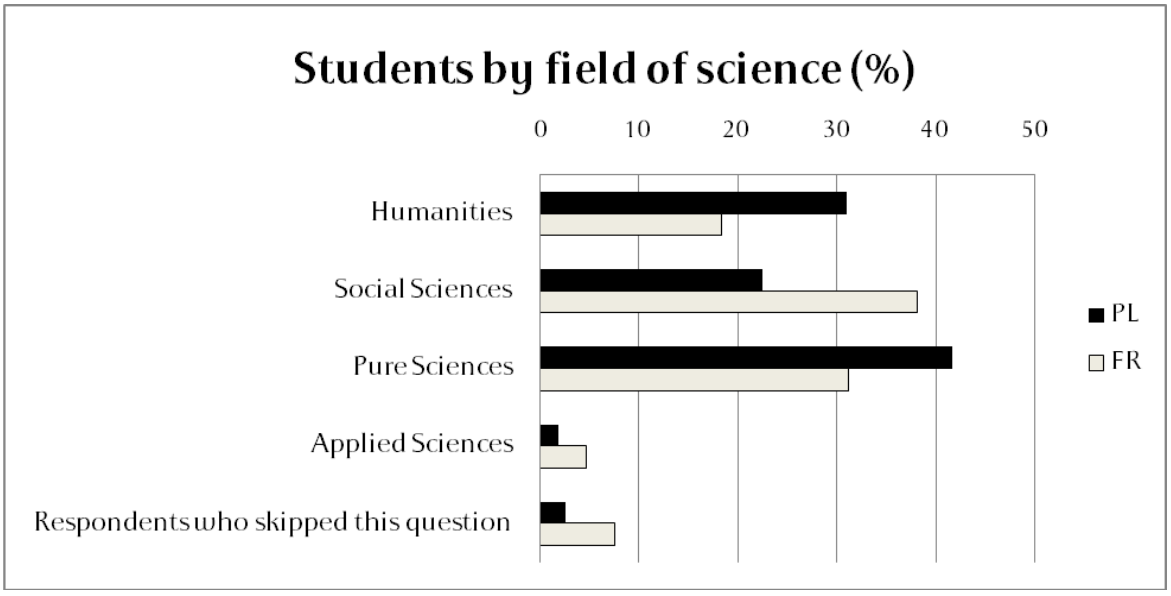
Generally, this study revealed the lack of awareness in many fields related to libraries at the Universities of Lille. The librarians are well prepared to

conduct the instruction in many fields related to library tools and resources. They have already prepared a rich educational offer and they are ready to train the students. The biggest problem here is not the content of trainings that might be inadequate for users' needs, but the lack of attendance. The students are not aware how diverse the offer of libraries is and that they can influence on the collections shape, suggesting items to purchase. This lack of awareness is a negative symptom and can indicate that students do not know how to fully benefit from the information resources.

2.8 The comparative study

2.8.1 Field of studies

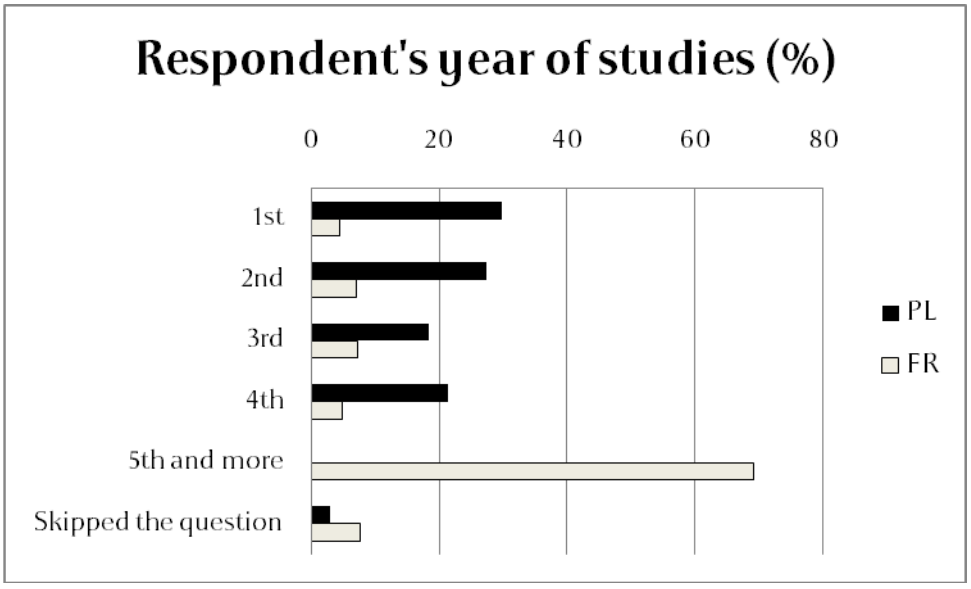
The fields of studies, presented on Graph 1 are as follows: 109 (41,76%) Polish PhD students and 99 (31,23%) French PhD students in Pure Sciences , 81 (31,03%) Polish PhD students and 58 (18,30%) French PhD students in Humanities, 59 (22,61%) Polish PhD students and 121 (38,17%) French PhD students in Social Sciences, and 5 (1,92%) Polish PhD students and 15 (4,73%) French PhD students in Applied Sciences. Among Polish respondents the biggest group comes from Pure Sciences. Among French respondents – from Social Sciences. In both cases, the smallest group of respondents represents Applied Sciences.



Graph 1 – Students by field of studies

2.8.2 Year of studies

Graph 2 presents French and Polish students by their year of doctoral studies. There were 78 (29.89%) Polish and 14 (4,42%) French students on the first year; 71 (27,20%) Polish and 22 (6,94%) French students on the second year; 48 (18,39%) Polish and 23 (7,26%) French students on the third year; 56 (21,46%) Polish and 15 (4,73%) French students on the fourth year; and 219 (69,09%%) French students who indicated fifth or higher year of doctoral studies. Here, it is important to remind the reader that in Poland doctoral studies last four years, while in France currently there are two paths: the so-called "old system" (fr. *ancien régime*) that assumes the duration of doctoral studies (or, more precisely, a preparation of doctoral thesis) up to six years; and the new system, based on the "Bologna Agreement" – the reform of the studies at the European level that was introduced in 1999. The new system of doctoral studies has been functioning in Lille since academic year 2009/2010. In new system, the doctoral studies last three years.

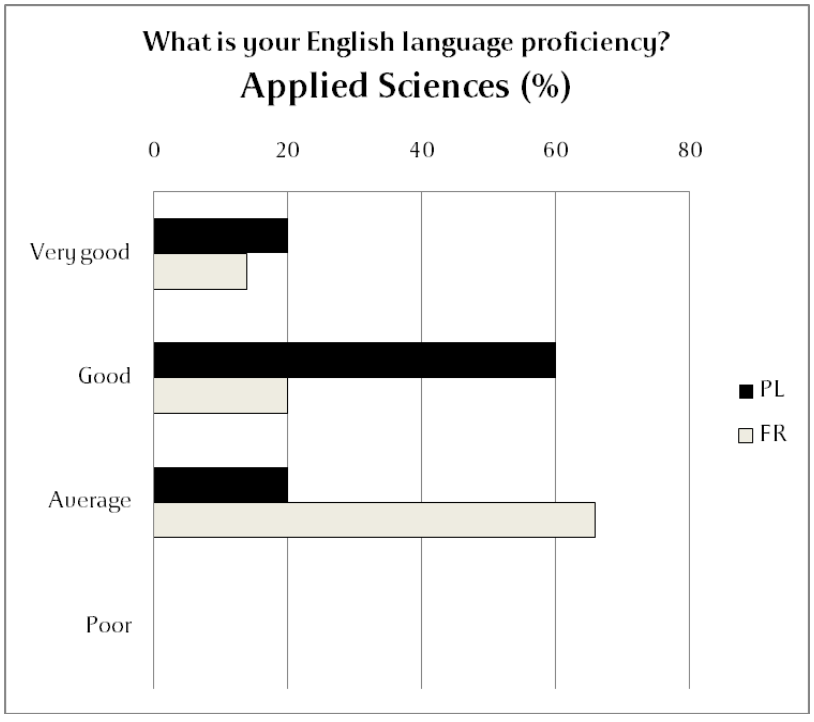


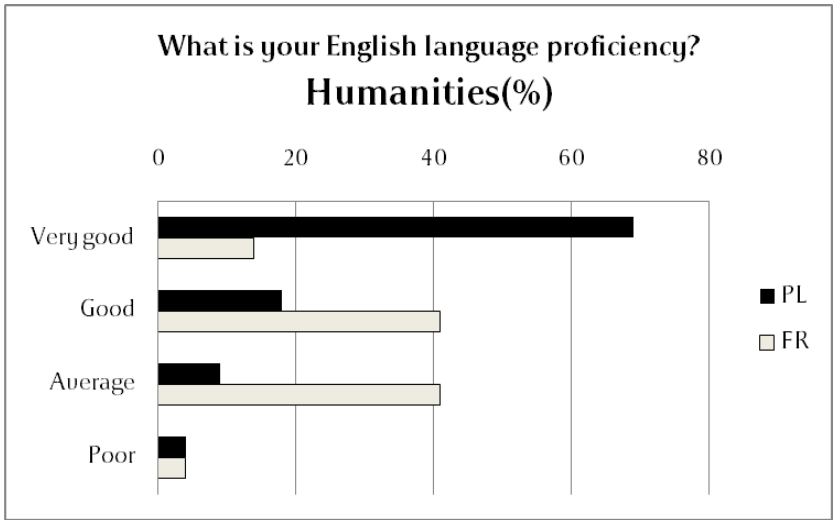
Graph 2 – Respondent's year of studies

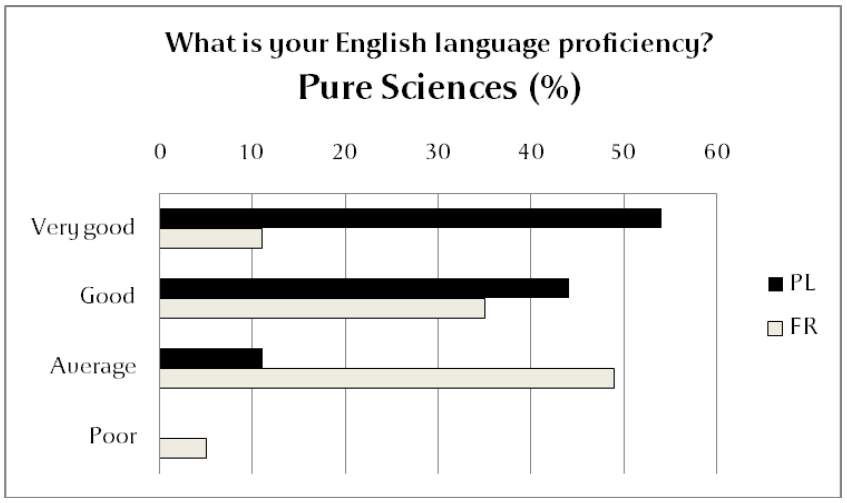
2.8.3 English proficiency

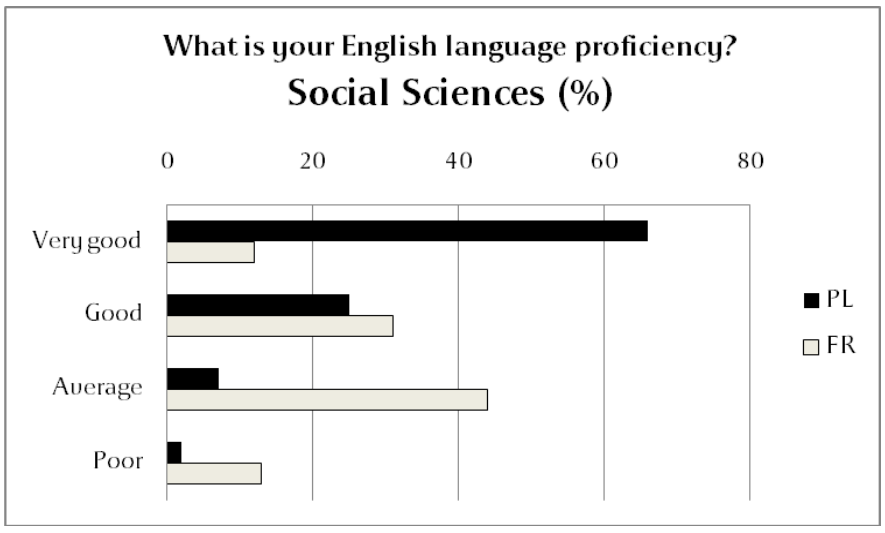
Graph 3 presents a self-perceived English proficiency of respondents. 11,04% of French and 57,47% of Polish students recognised their English proficiency very good. 32,49% of French and 29,89% of Polish respondents perceived their English level as good. The biggest group of French respondents marked "average" while for Polish students this option was rather in minority with the score of 8,81%. 6,62% of French and 1,53% of Polish doctoral students confessed the poor English level. However, in both cases there were no respondents who declared no English skills.

The data show that generally Polish doctoral students know English better than their French colleagues. Good knowledge of English, that is a global language of science nowadays, is necessary for conducting research (especially at the stage of literature review), establishing international research networks, publishing and communicating on the international forum.





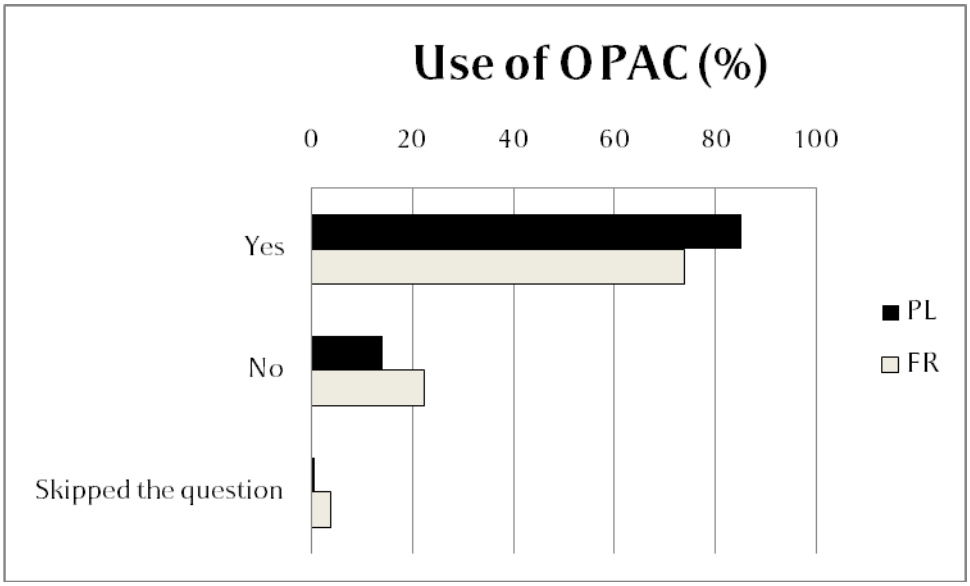




Graph 3 – Respondents' English language proficiency and the field of study

2.8.4 Use of OPACs

As presented on Graph 4, the majority of respondents, both French 234 (73,82%) and Polish 222 (85,06%) students, answered they use Online Public Access Catalogues (OPACs). There were 71 (22,40%) French and 37 (14,18%) Polish respondents who do not use it. In this case, the percentage of French students who do not use OPAC is more than 20% and can be perceived as somewhat high and having general impact on use of library resources (both in print and electronic format).

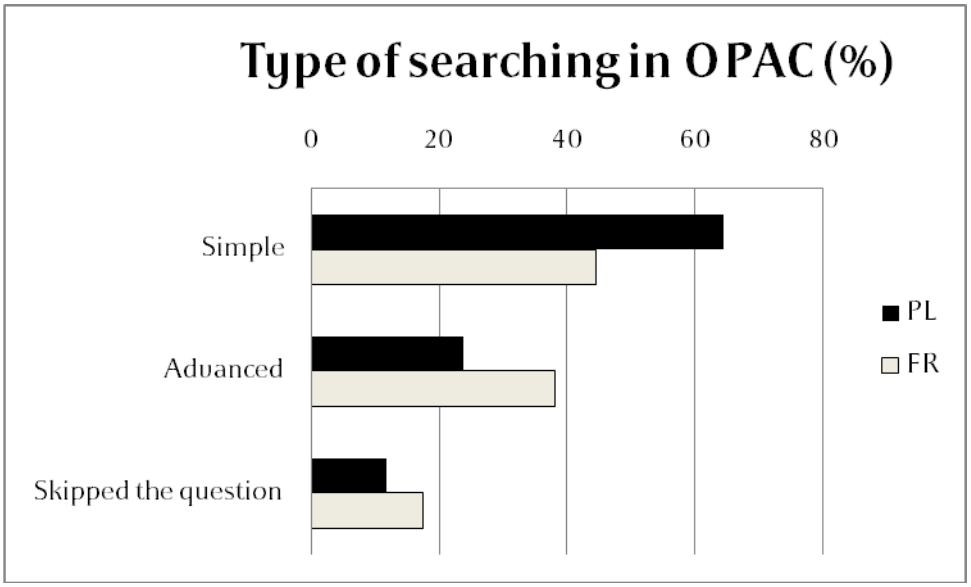


Graph 4 – Use of OPACs

2.8.5 Type of searching in OPACs

The data shown on Graph 5 present a spreading of answers related to type of searching in OPAC. Those respondents, who did not answer, marked the option "no" in the question about use of OPAC. That is why on the Graph 5 the number of persons who skipped the question is big both in French and Polish cases. OPACs simple searching is used by 168 (64,37%) Polish and 141 (44,48%) French students, while advances searching by 62 (23,75%) Polish and 121 (38,17%) French students. The results revealed that French students are

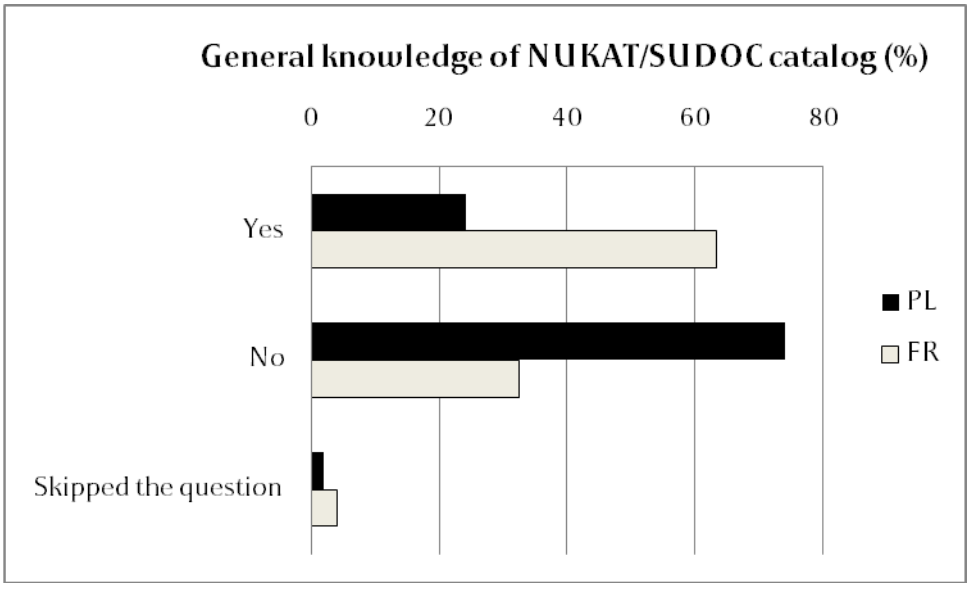
more familiar with advanced searching option. However it must be highlighted that less French students use OPACs in general.



Graph 5 – Type of searching in OPACs

2.8.6 General knowledge of NUKAT/Sudoc catalogue

Both NUKAT and Sudoc are national union catalogues of research and academic libraries. That is why, even if in the study Polish students were asked about NUKAT and French students about Sudoc, the results can be compared as the goals and the roles of these two catalogues are similar. The union catalog is not known by 193 (73,95%) Polish and 103 (32,49%) French students. 63 (24,14%) Polish and 201 French students (63,41%) answered they do know the union catalog. These data show that among Polish doctoral students NUKAT is known by less that one-fourth of respondents while more that a half of French students know Sudoc. The union catalogues are very important place for searching bibliographic data of publication not available in one's own university library, thus their knowledge can help in bibliographic research for thesis purpose. The union catalogues should be known and wide used by doctoral students.

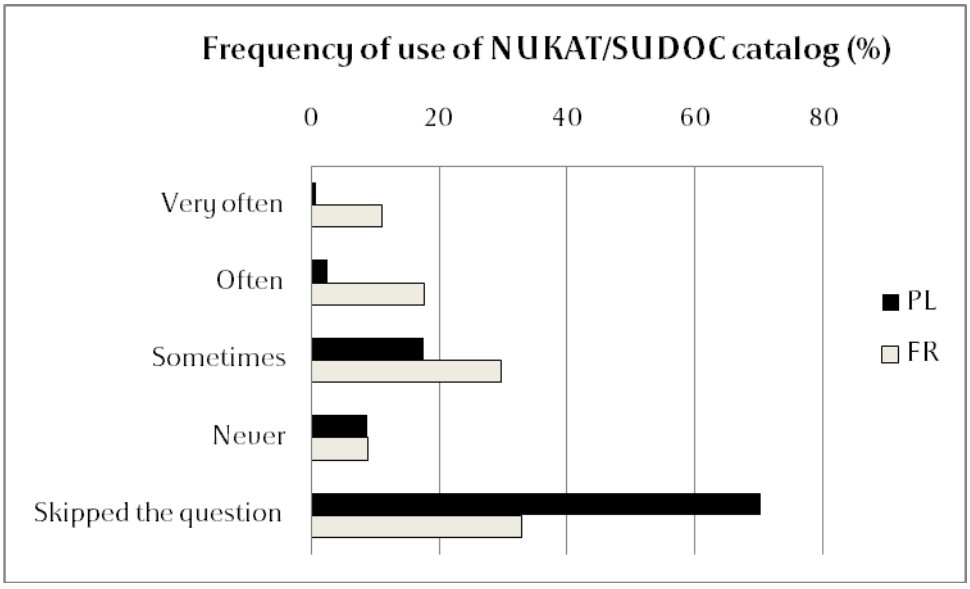


Graph 6 – General knowledge of NUKAT/Sudoc catalogue

2.8.7 Frequency of use of NUKAT/Sudoc catalogue

Only 78 Polish respondents (29,88% of total sample, N=261) provided the information related to the frequency of use of national catalogue, comparing to 218 French students (68,76% of total sample, N=317). Besides, 70,11% of Polish respondents skipped this question what is thought-provoking. These data confirm that at the University of Warsaw NUKAT catalogue is unknown among doctoral students and, even if some students use this tool, they use them rather from time to time and not regularly.

For French students SUDOC catalogue seems to be a well-known and willingly used tool. The fact that SUDOC is connected with a developed and automatic system of inter library loan (ILL) also argues for using it as students are aware that they can very easy order any document from whole France and they will got it quickly. In Poland, ILL is well developed even though NUKAT catalogue does not provide automated service. ILL is realized in a traditional way, however students' awareness about its work is very low.



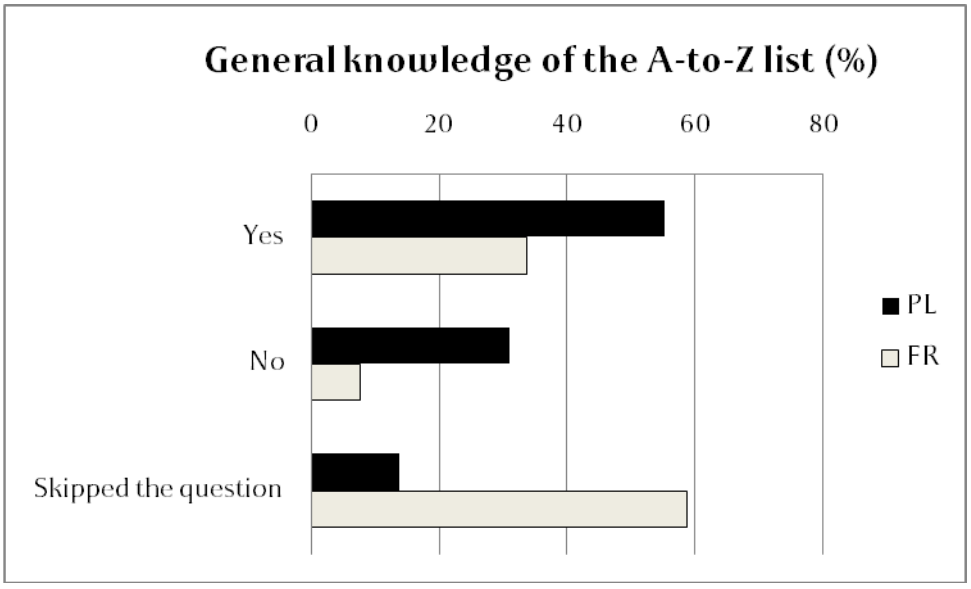
Graph 7 – Frequency of use of NUKAT/Sudoc catalogue

2.8.8 General knowledge of the A-to-Z list

Graph 8 illustrates the results of the question on general knowledge of A-to-Z list. To remind, A-to-Z list is a web-based tool that provides the single, comprehensive list of the e-journals provided by the library.

In this case, the big number of French students (58,68%) who skipped the question poses reflection. It can be surmised that these respondents search electronic journals in other way or they use A-to-Z list without awareness of this tool's name. The term "awareness" that is introduced here, will be recalled frequently, in the case of big number of respondents skipping questions. The lack of awareness is a highly probable reason of omitting certain questions and it will emerge several more times in this study.

Apart from this group, A-to-Z list is known both by French (33,75%) and Polish (55,17%) students and the further questions revealed that students in both countries master the use of e-journals to the extent allowing them to conduct the bibliographical searching for the purpose of doctoral study, however not without difficulties that will be described further.

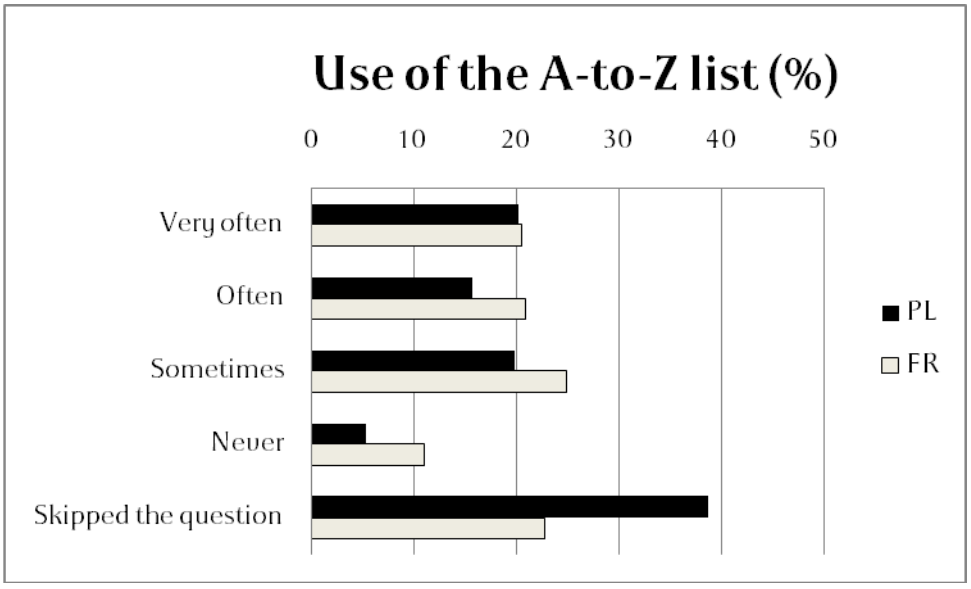


Graph 8 – General knowledge of the A-to-Z list

2.8.9 Use of the A-to-Z list

In this case, the spread of answers was similar for France and Poland. If students are know A-to-Z list, they know what this tool serves for and how it might be useful in research, thus, they use it very often (33,13% - Poland; 20,50% - France) or often (25,63% - Poland; 20,82% - France). The answer "sometimes" scored also a high rate (32,50% – Poland; 24,92% - France).

This confirms the general principle refers to all library's tools, services, and resources – when user knows their value, she/he appreciates it and uses regularly. But the key-matter, revealed by the results of this study, again is awareness. In several cases, doctoral students just do not know what library puts at their disposal and how this can facilitate their research. This phenomenon was also confirmed by respondents' comments left in the questionnaire, confessing that this survey allowed them to realize how many resources and tools libraries offer and how little they know about them. The reasons of this situation will be investigated afterwards as well, while analyzing further data. In fact, even the analysis of the next question will partly explain this problem.

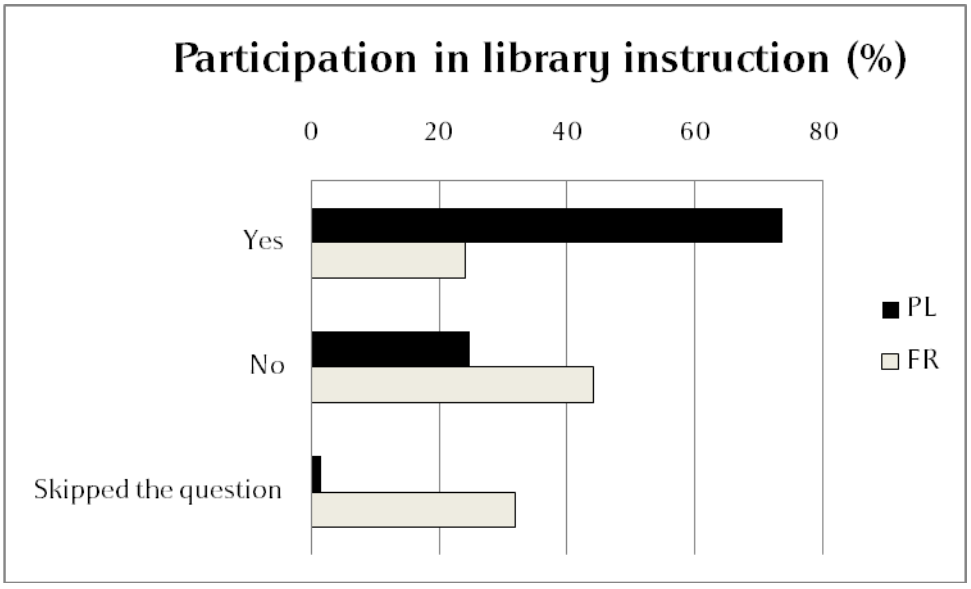


Graph 9 – Use of the A-to-Z list

2.8.10 Participation in library instruction

Graph 10 illustrates the participation in library instruction. Here, a big difference between French and Polish students can be observed. While 73,56% of Polish respondents declared their participation in the library instruction, 44,16% of French students confessed they did not participate, moreover, 31,86% of French respondents skipped this question (comparing to 1,53% of Polish respondents who did it) what also provokes reflection.

This is the first factor indicating the problem related to library instruction in both countries. In Poland – students overall participate, but the effects are not satisfying (what will be discussed afterwards), while in France they do not participate though the offer of library education is fairly developed.

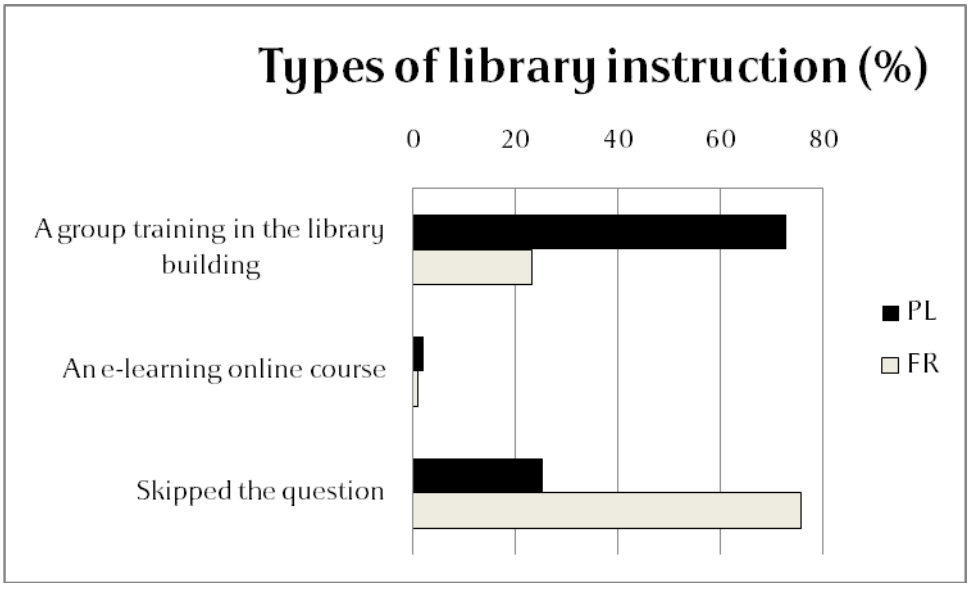


Graph 10 – Participation in library instruction

2.8.11 Types of library instruction

Both in France and in Poland university libraries offer on-site instruction in their buildings as well as online trainings. And in both countries users participating in the online training are in the minority (1,92% – Poland; 0,95% - France). It seems that a traditional library instruction still remains more popular; or the online one is not well promoted and students do not know that they can participate in it remotely without the necessity of coming to the library. In any case, both types of instruction need a thoughout reflection and restructuring because they do not meet users' needs and expectations what will be presented in further data analysis.

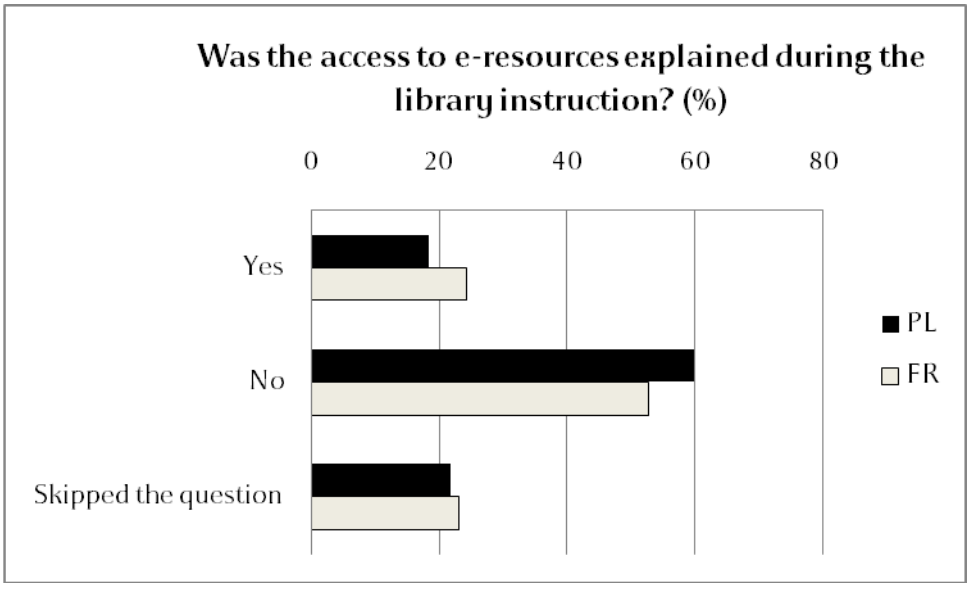
Still, the number of French respondents who skipped this question puzzles.



Graph 11 – Types of library instruction

2.8.12 Access to e-resources and library instruction

French and Polish respondents agreeably stated (59,77% - Poland; 52,68% - France) that the rules of access to electronic resources had not been explained efficiently during the library instruction. This might affect their research, especially in the case of those students for whom foreign journals publications are the basis of bibliography research. Here, the number of respondents who skipped the question was relatively small, however the number of negative answers provokes reflection on standards and content of library instruction.

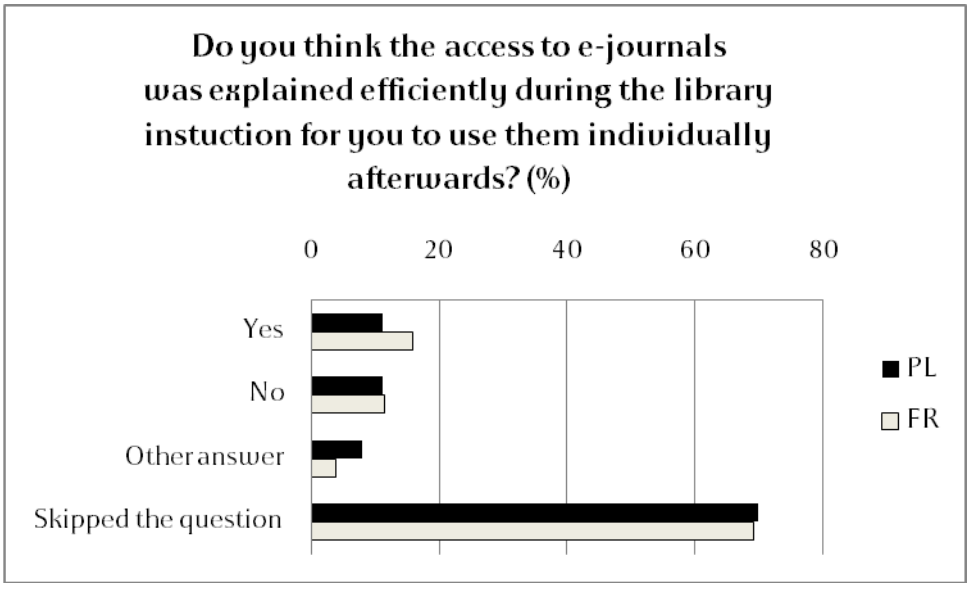


Graph 12 – Access to e-resources explained during library instruction

2.8.13 The efficiency of library instruction

Graph 13 illustrates the doctoral students' perception of library instruction efficiency concerning access to e-journals. The question aimed at defining if the explanation during the library instruction were efficient for further individual work with e-journals. The data analysis provided interesting results.

Nearly the same number of Polish (69,73%) and French (69,09%) respondents skipped this question; and among those who answered the spread was also very similar. The answer "yes" was marked by 11,11% of Polish and 15,77% of French students; and "no" by 11,11% of Polish and 11,36% of French respondents. This can be interpreted as a lack of assurance, this phenomenon was already discussed as one of the categories in section 2.4.3 (Grounded theory) and will emerge several more times further in this study. Here, the number of positive answers is relatively small and comparable with the number of negative ones. Also, the number of respondents who did not provide any answer might confirm that the use of electronic resources is not the doctoral students' strength.

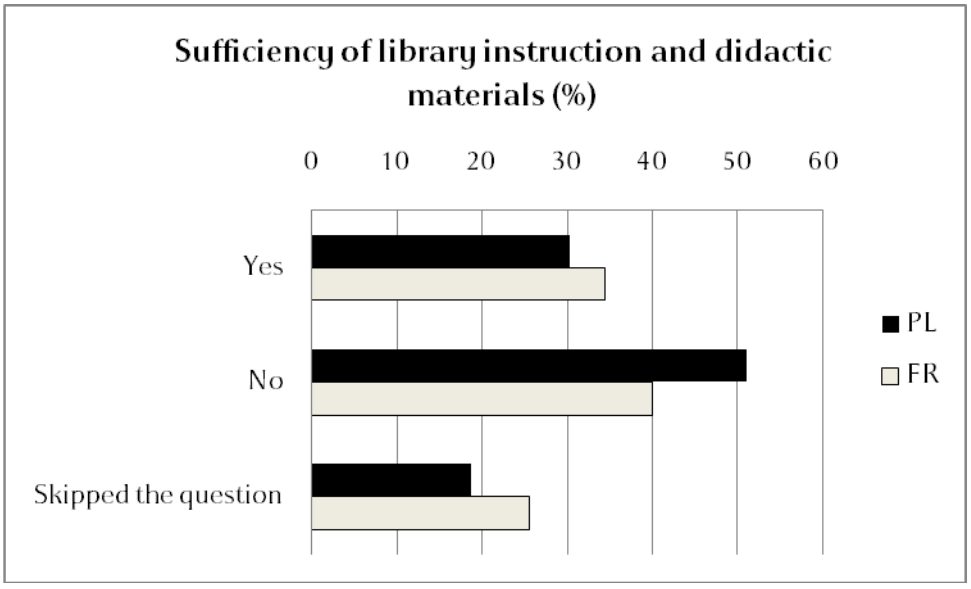


Graph 13 – Efficiency of library instruction

2.8.14 Sufficiency of library instruction and didactic materials

During the educational process, additional didactic materials (slides, handouts, information on website, leaflets, etc.) distributed by a teacher/trainer play a major role. Similar is in the case of library instruction – if some topics discussed during the instruction were not explained efficiently, these materials can be useful afterwards, while working individually with library resources and tools.

In this study 50,96% of Polish and 40,06% of French respondents answered that both the library instruction and didactic materials were not sufficient for later, individual work, while 30,27% of Polish and 34,38% of French students found them sufficient. Again, the number of respondents who skipped the question (18,77% - Poland; 25,56% - France) is thought-provoking, however it can be explained by the fact that the students who have never participated in the library instruction could not have their opinion on the didactic materials distributed on the training.

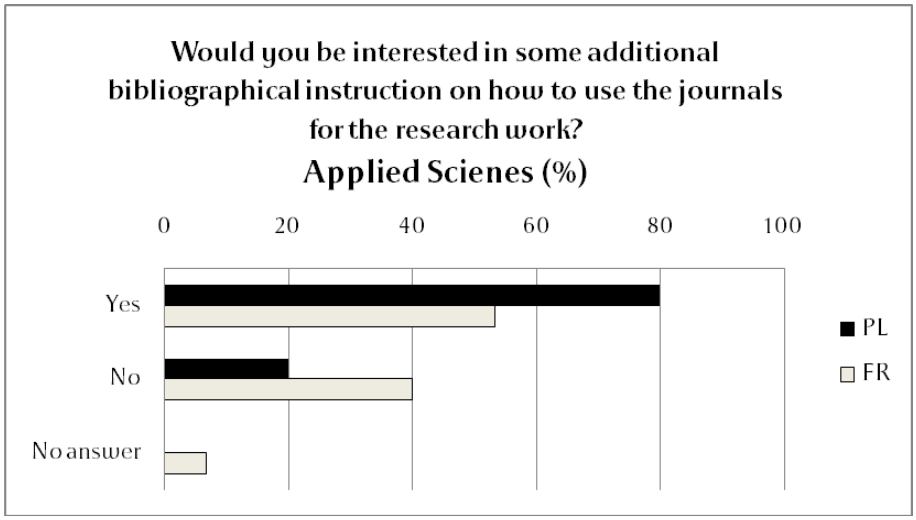


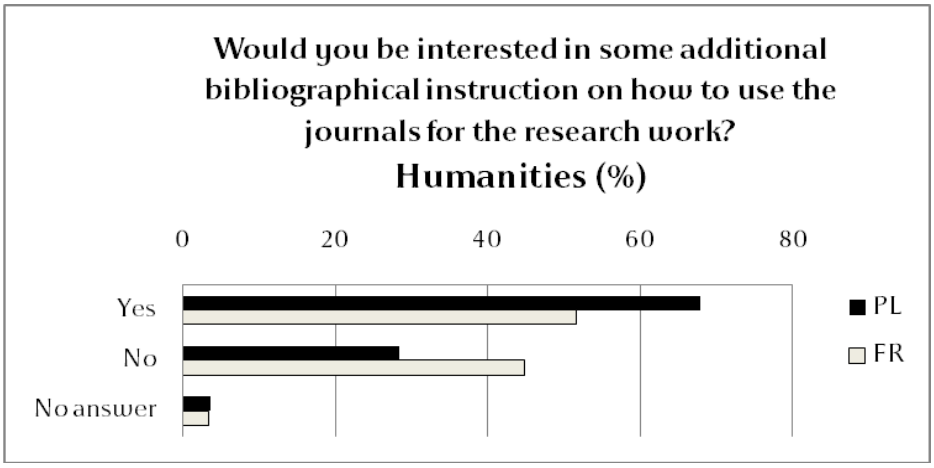
Graph 14 – Sufficiency of library instruction and didactic materials

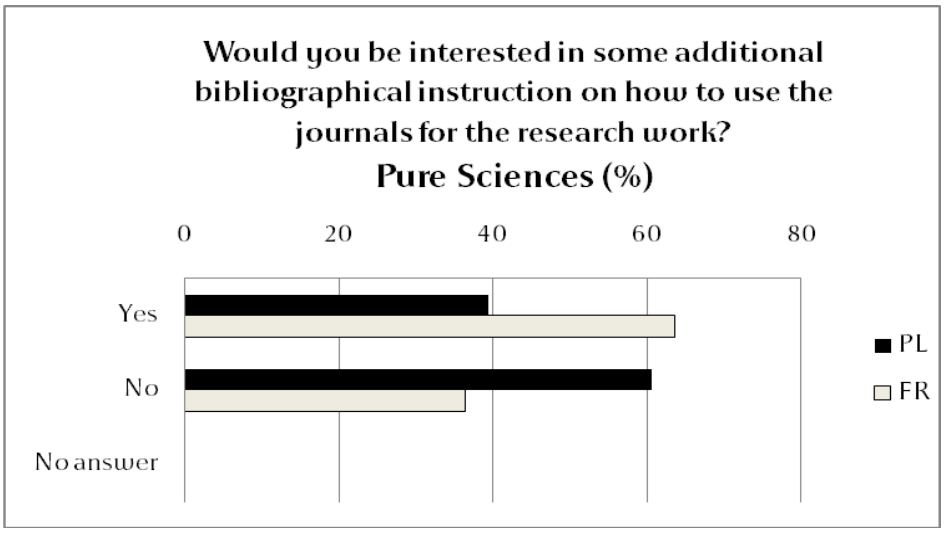
2.8.15 Additional bibliographic instruction and the field of study

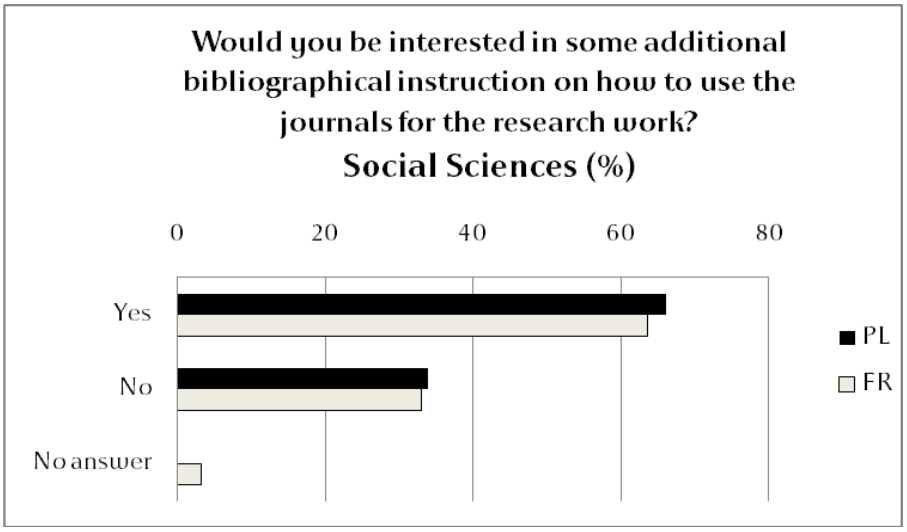
Previous results showed that not many students participated in the library instruction and, even if they did, the majority was not convinced about their knowledge of tolls and resources as well as about their own information skills. Thus, it seems pertinent to investigate if doctoral students would be interested in additional library instruction and to see at once how this will is spread among respondents' fields of study.

Generally, the answer "yes" were predominating, however a slightly biggest interest in additional training could be observed among Polish students (apart from Pure Sciences representatives who were in minority – 39,45%, comparing to French representatives of this field of study: 63,64%). These results also prove and bring a summary of the wider problem related to existing library instruction at both universities. They are not sufficiently promoted (what results in low participation), they do not transfer sufficient knowledge and skills and they do not provide supplementary materials for individual further work.


Would you be interested in some additional bibliographical instruction on how to use the journals for the research work?
Applied Scienes (%)
0
20
40
60
80
100
Yes
No
No answer
PL
FR


Would you be interested in some additional bibliographical instruction on how to use the journals for the research work?
Humanities (%)
0
20
40
60
80
Yes
No
No answer
PL
FR


Would you be interested in some additional bibliographical instruction on how to use the journals for the research work?
Pure Sciences (%)
0
20
40
60
80
Yes
No
No answer
PL
FR



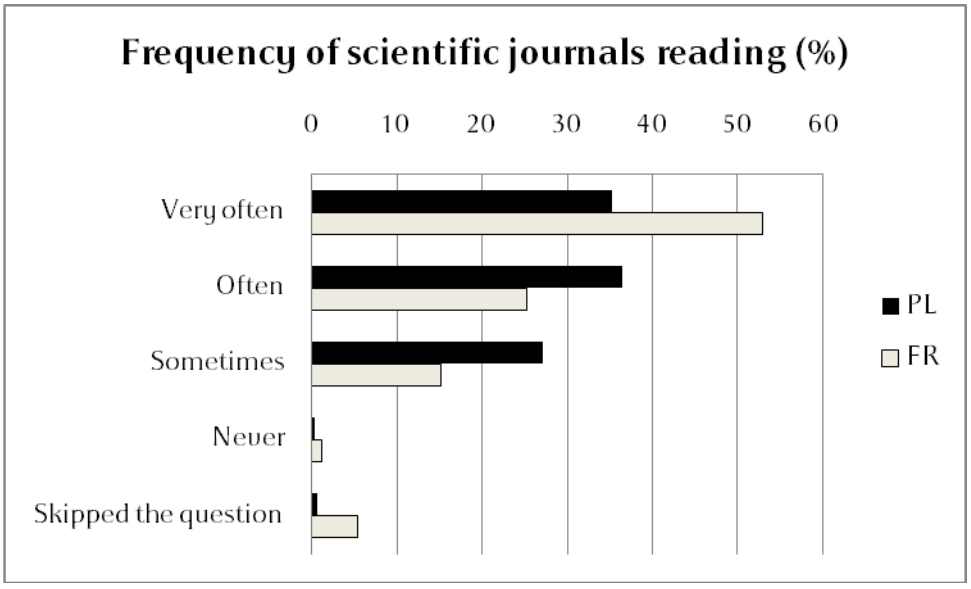
Graph 15 – Additional bibliographic instruction and the field of study

2.8.16 Frequency of scientific journal reading

The next set of questions investigated reading of scientific journals among doctoral students. In this case, both electronic and printed journals were taken into consideration.

In general, doctoral students from both universities read scientific journals quite regularly. The answer "very often" (28,25% - Poland; 53% - France) and "often" (23,37% - Poland; 25,24% - France) were the most frequently marked. Only 7,66% of Polish and 1,26% of French respondents confessed they do not read scientific journals. Also the number of respondents who skipped the question was relatively low (12,64% - Poland; 5,36% - France).

This optimistic result open a gate to studying other issues related to scientific journals, results of which will be presented on the following graphs.

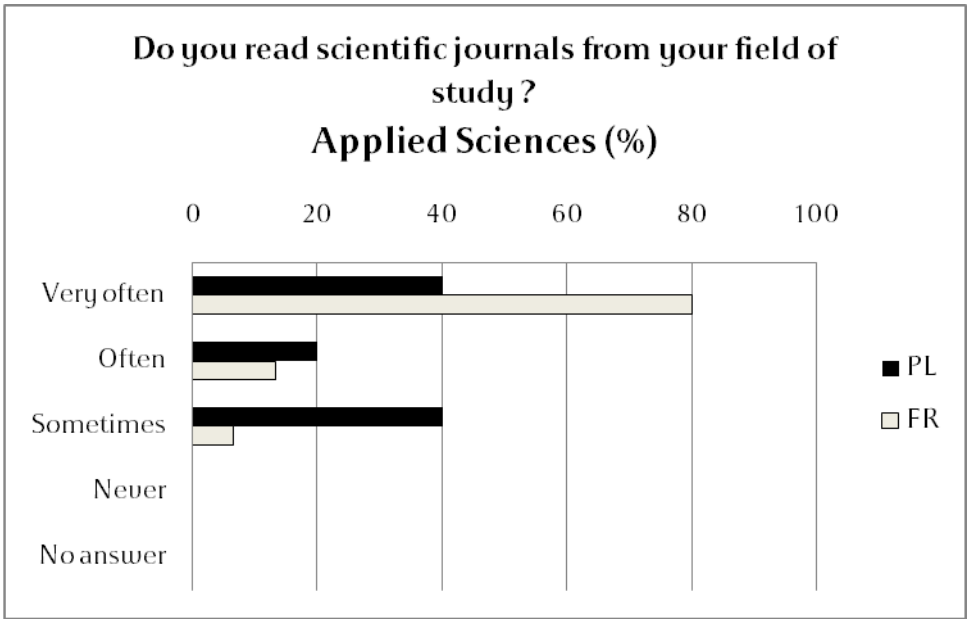


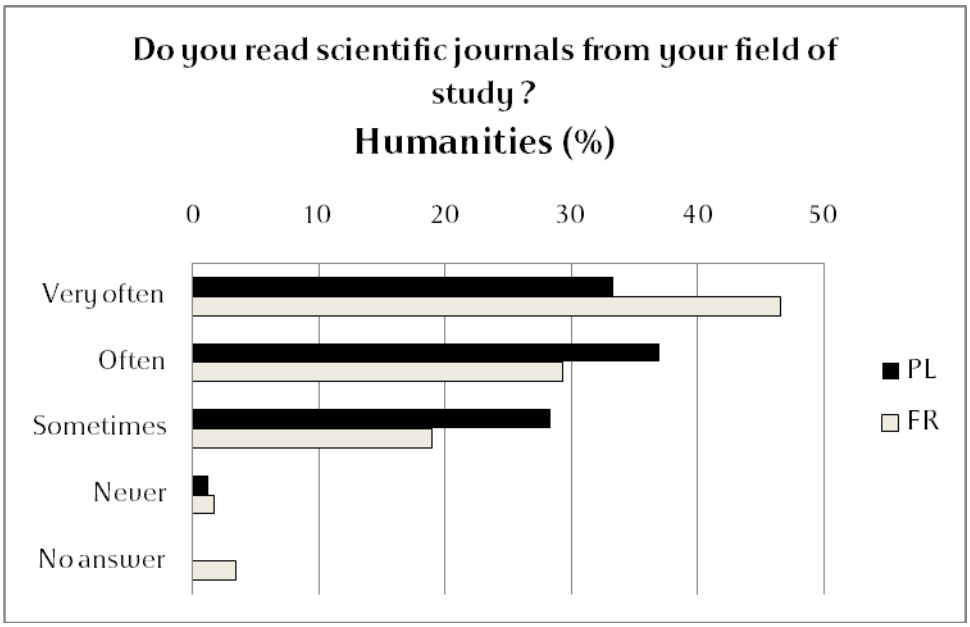
Graph 16 – Frequency of scientific journal reading

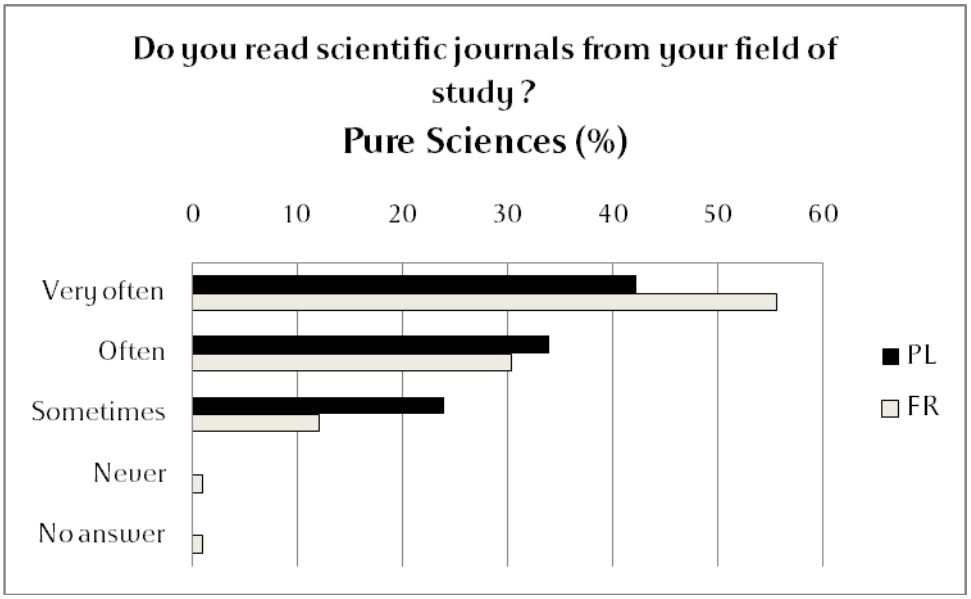
2.8.17 The awareness of the existence of online scientific journals and the field of study

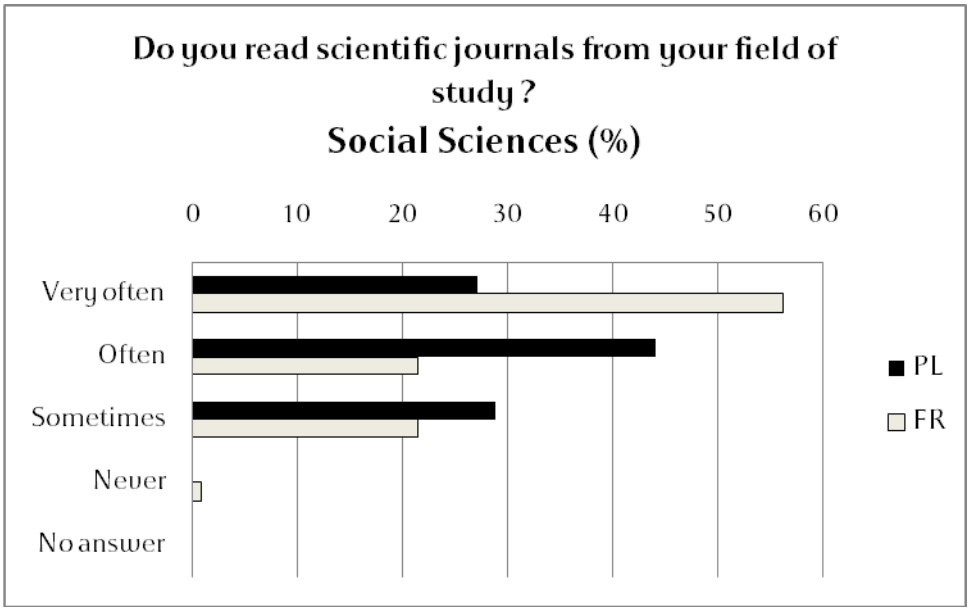
It seemed pertinent to investigate if students read scientific journals from their field of study and how often they do that.

Generally, the results are optimistic – doctoral students in both countries read scientific journals regularly, in majority often or very often, regardless their field of study. From this perspective, four respondents who confessed that they never read journals (one Polish representative of Humanities and three French representatives of, respectively, Humanities, Pure Sciences, and Social Sciences) are not a major factor as well as the percentage of respondents who skipped this question (2,68% - Poland; 4,42% - France).


Do you read scientific journals from your field of study ?
Applied Sciences (%)
0
20
40
60
80
100
Very often
Often
Sometimes
Never
No answer
PL
FR


Do you read scientific journals from your field of study ?
Humanities (%)
0
10
20
30
40
50
Very often
Often
Sometimes
Never
No answer
PL
FR





Graph 17 – Awareness of the existence of online scientific journals and the field of study

2.8.18 Frequency of reading e-journals provided by the library and the field of study

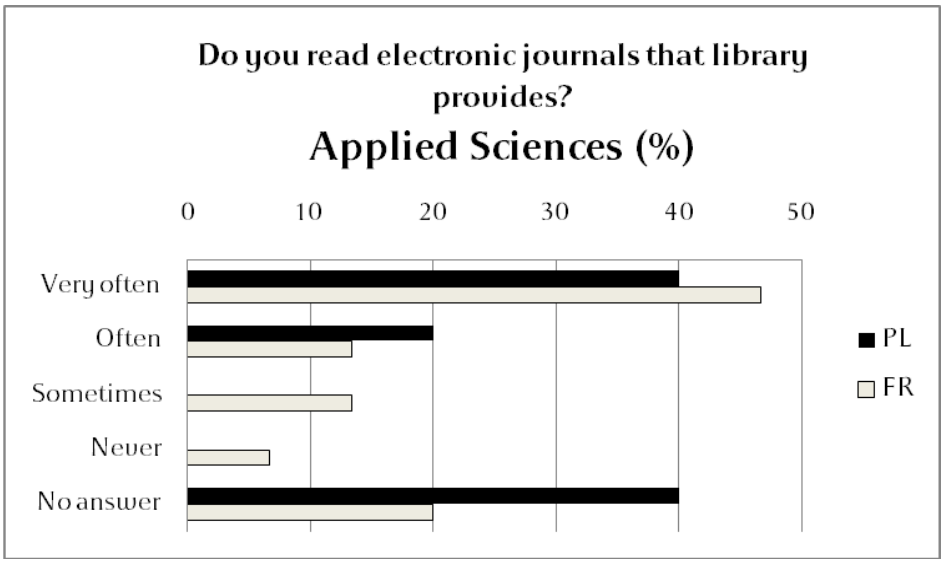
The previous question was related to scientific journals in general, regardless their format or provider. This question aimed at investigation if doctoral students read electronic journals that university library provides and how it is spread among fields of study.

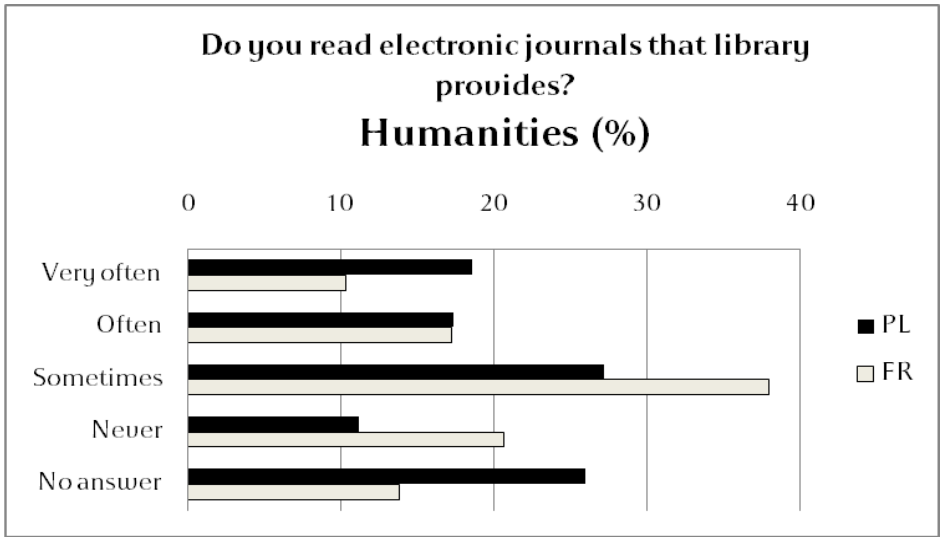
First of all, the results show that there are students who do not read e-journals at all. This can be observed both in France and Poland, however in France this phenomenon is more visible and might annoy, especially in the case of Pure Sciences students (19,19%) for whom the e-journals should be the major source of knowledge acquisition and transfer; besides in this field of study printed journals or monographs hardly exist nowadays, thus the main messenger of the newest research and achievements are electronic publications.

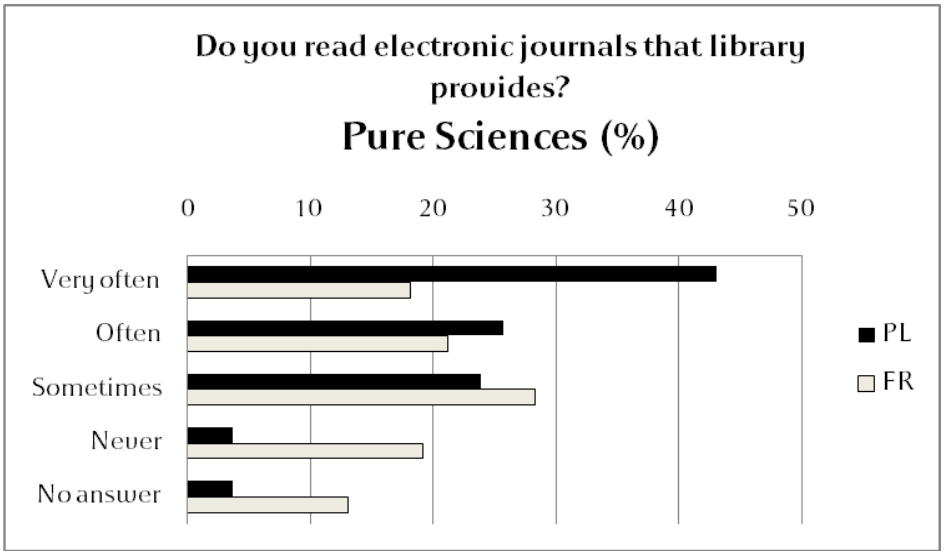
In the case of France, 20,69% of doctoral students representing Humanities (comparing to 11,12% of Polish respondents) also declared they never read e-journals. However, this number surprises less as for this field of study the main source of knowledge acquisition are rather monographs than journals.

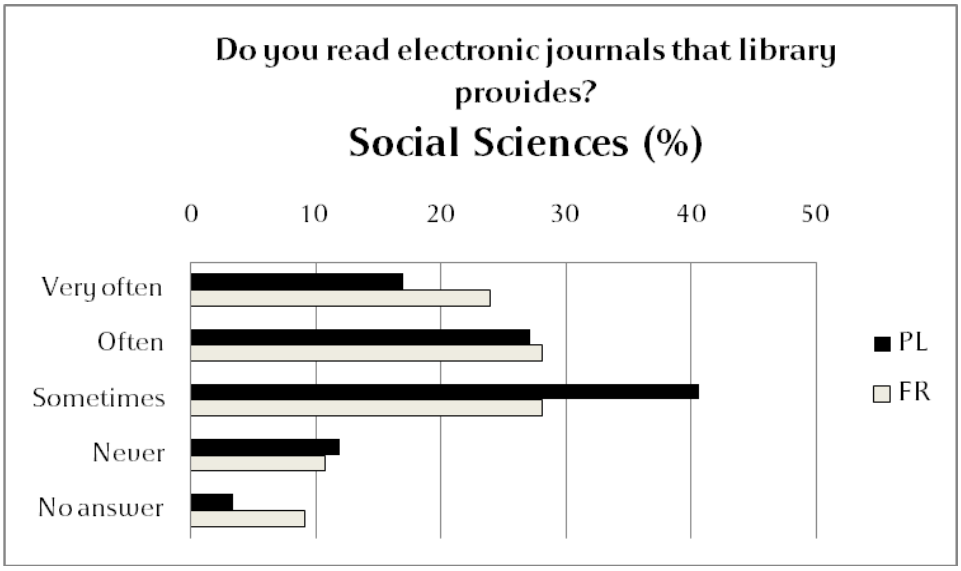
The two cases described above will be also a subject of further investigation when potential obstacles in reading of journals will be discussed.

Apart from these "never" indications, doctoral students read e-journals. The biggest group that uses this source of information most often are French students of Applied Sciences (46,66%) and Polish students of Pure Sciences (43,11%). However, the percentage of indications the options "often" and "sometimes" was also high.




Do you read electronic journals that library provides?
Humanities (%)
0
10
20
30
40
Very often
Often
Sometimes
Never
No answer
PL
FR


Do you read electronic journals that library provides?
Pure Sciences (%)
0
10
20
30
40
50
Very often
Often
Sometimes
Never
No answer
PL
FR


Do you read electronic journals that library provides?
Social Sciences (%)
0
10
20
30
40
50
Very often
Often
Sometimes
Never
No answer
PL
FR

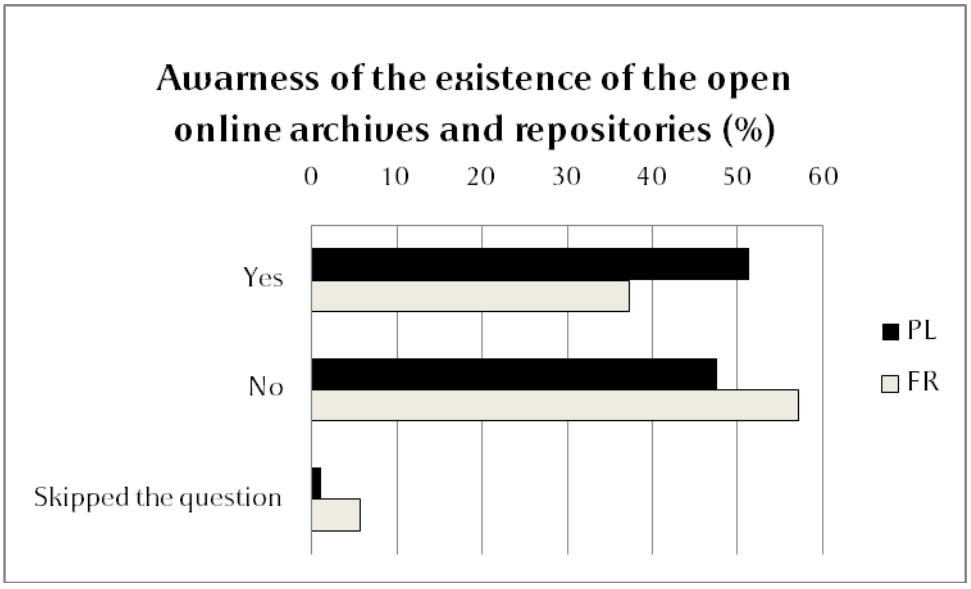
Graph 18 – Frequency of reading e-journals provided by the library and the field of study

2.8.19 Awareness of the existence of the open online archives and repositories

The next set of questions was related to open archives and repositories. Nowadays, this Open Access way of publishing becomes more and more popular and promoted. Moreover, currently at both universities, the projects concerning compulsory deposit of research publications are being implemented. Hence, it seemed relevant to investigate doctoral students' awareness of this subject.

On the other hand, the big number of worldwide repositories and open archives existing already is also a great source of publications, so they can serve not only to depose one's own work, but first of all as a network of databases useful at the stage of searching of bibliography.

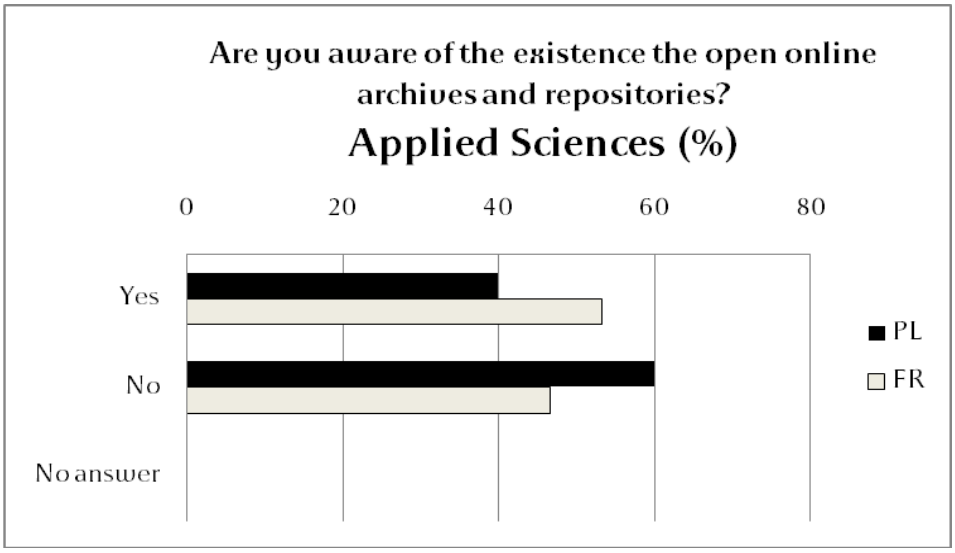
In the case of this question, the number of respondents who declared that they know open archives and repositories was almost the same as that of respondents who did not have this awareness. 51,34% of Polish and 37,22% of French doctoral students know that online archives and repositories exist, while 47,15% of Polish and 57,10% of French students do not. There were also 11,49% of Polish and 5,68% of French respondents who skipped the question.

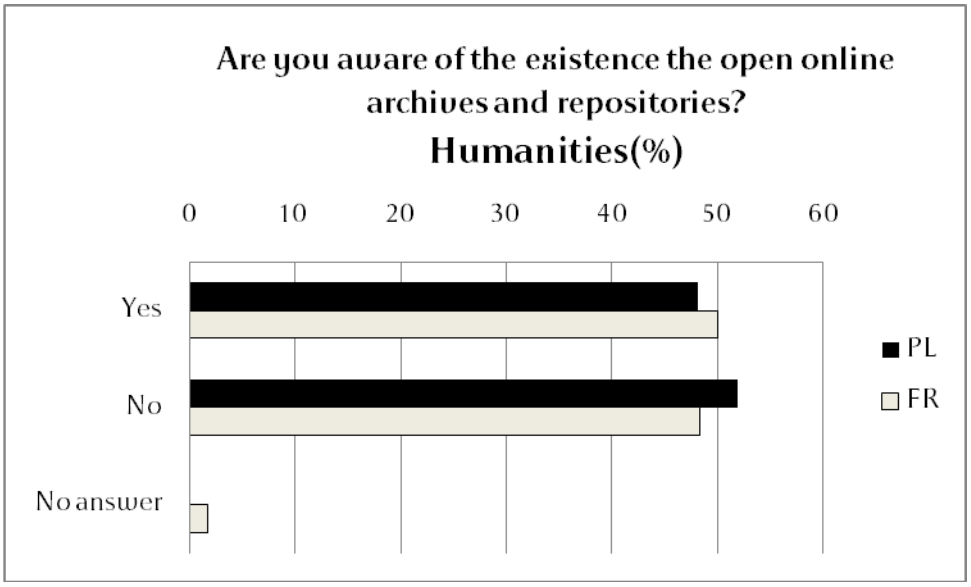


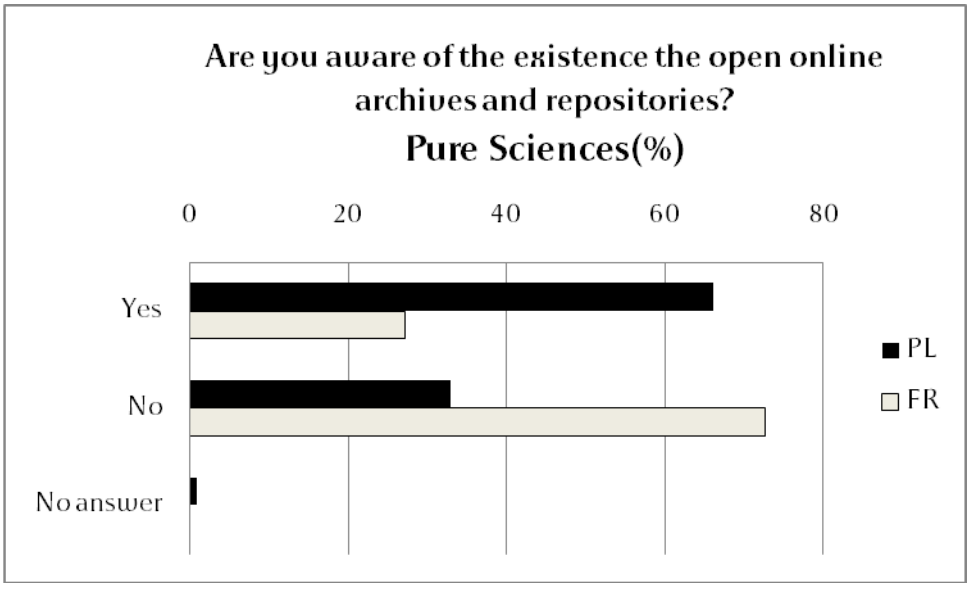
Graph 19 – Awareness of the existence of the open online archives and repositories

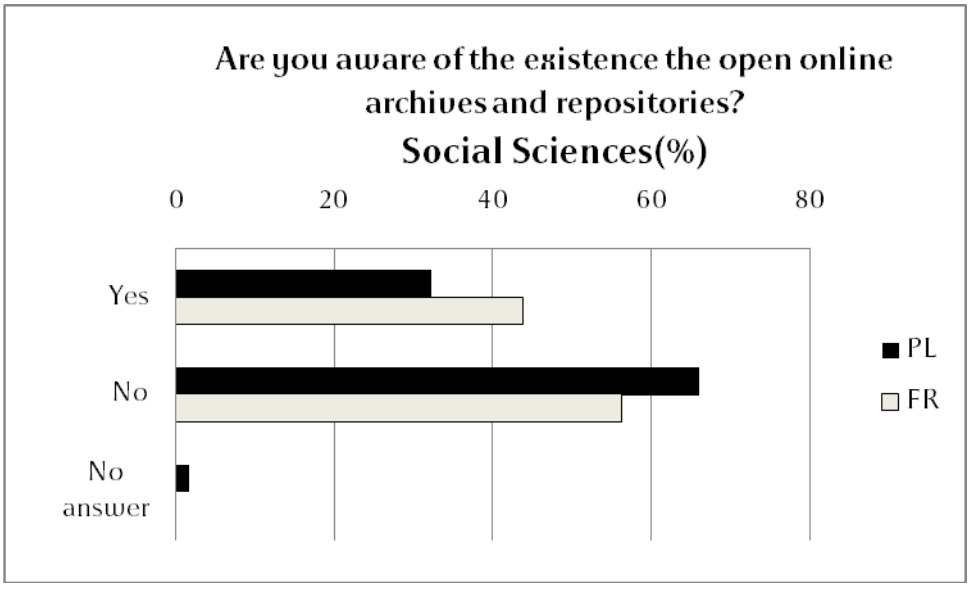
2.8.20 Awareness of the existence of the open online archives and repositories and the field of study

In this case the students of Humanities provided the most comparable results. Both French and Polish students gave almost the same number of positive (48,15% - Poland; 50% - France) and negative (51,85% - Poland; 48,28% - France) answers. In the case of other fields of study the results were diversified. However, it could not be recognised that online archives and repositories are commonly known by doctoral students and the number of negative answers provided by Polish students of Social Sciences (66,10%) and French students of Pure Sciences (72,73%) confirm this conclusion.


Are you aware of the existence the open online archives and repositories?
Applied Sciences (%)
0
20
40
60
80
Yes
No
No answer
PL
FR


Are you aware of the existence the open online archives and repositories?
Humanities(%)
0
10
20
30
40
50
60
Yes
No
No answer
PL
FR

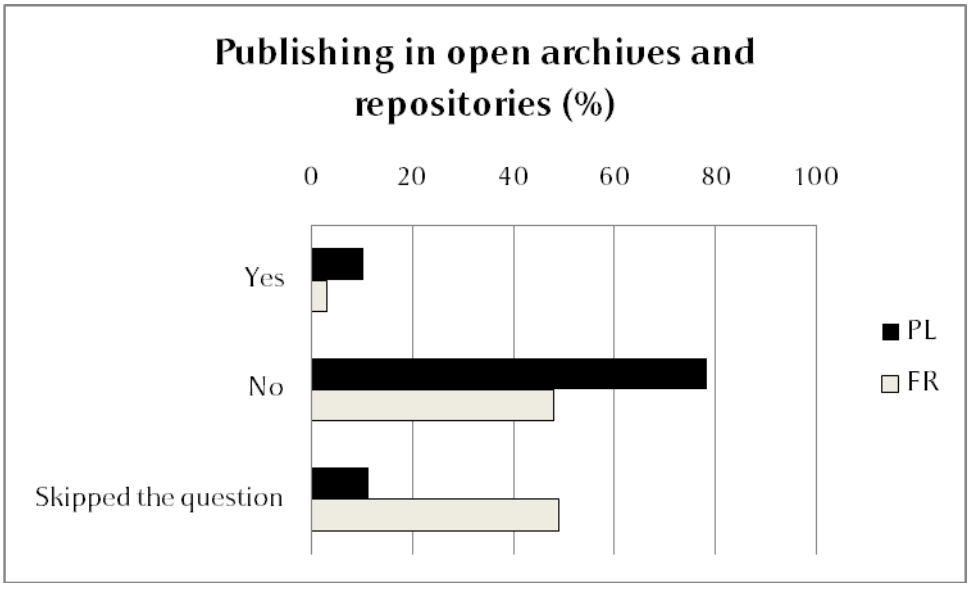

Are you aware of the existence the open online archives and repositories?
Pure Sciences(%)
0
20
40
60
80
Yes
No
No answer
PL
FR



Graph 20 – Awareness of the existence of the open online archives and respositories and the field of study

2.8.21 Publishing in open archives and repositories

The conclusions discussed in the previous point are confirmed also by the results of the analysis of answers given to the question on publishing in open archives and repositories. The predominant number of respondents (78,17% - Poland; 47,95% - France + 48,90% of French respondents who skipped the question) answered they have never deposed their work there. Only 10,34% of Polish and 3,15% of French doctoral students have done it.



Graph 21 – Publishing in open archives and repositories

2.8.22 Obstacles hindering the use of scientific journals

This question aimed at verification what disturbs students in reading scientific journals; what obstacles can be observed; and if they influence on conducting doctoral research.

The big group of respondents (42,14% - Poland; 46,37% - France) indicated that there were no obstacles. However, as it was multiple-choice question, more than one answer was allowed.

The answers can be divided into two categories.

Category 1. Library instruction. There are certain obstacles that can be related to the insufficient library instruction or its absence, For example, expressed explicit "I was not trained how to access and use journals", indicated by 24,92% of French and 23,75% of Polish respondents. This is not unexpected, knowing already how many doctoral students have never participated in the library instruction (to recall: 44,16% - France; 24,90% - Poland), however it might be caused also by the fact that use of journals was not the topic discussed during the library instruction at both universities.

“The library does not help me improve my knowledge about scientific journals”. This obstacle (indicated by 18% of Polish and 15,14% of French students) is also closely connected with library instruction and/or distribution of didactic materials.

“The electronic journals the library provides are complicated in use”. The respondents might consider the use complicated because they have not been trained enough. 16,09% of Polish and 3,15% of French doctoral students marked this obstacle.

“I do not know how to search in bibliographies of journals”. Here, as previously, the reason might be the absence of training. This identified ignorance is an obstacle for 14,56% of Polish and 5,68% of French respondents.

“There are no librarians who know how to help me in searching scientific journals”. This statement might be perceived as a personal opinion or a result of ineffectual attempt of searching information in the library building. For 9,96% of Polish and 8,83% of French respondents this is an obstacle. And it can be linked with the opinion “I was not informed about the importance of scientific journals”, indicated by 6,51% of Polish and 5,04% of French doctoral students.

All the obstacles described above can pose a basis of critical reflection about the library instruction and the skills that are taught. Generally, it can be observed that Polish doctoral students find more obstacles than their French colleagues. This can be related to the content of library instruction offered by the University of Warsaw that is little developed and still similar rather to the traditional “bibliographic instruction” than to the modern IL education.

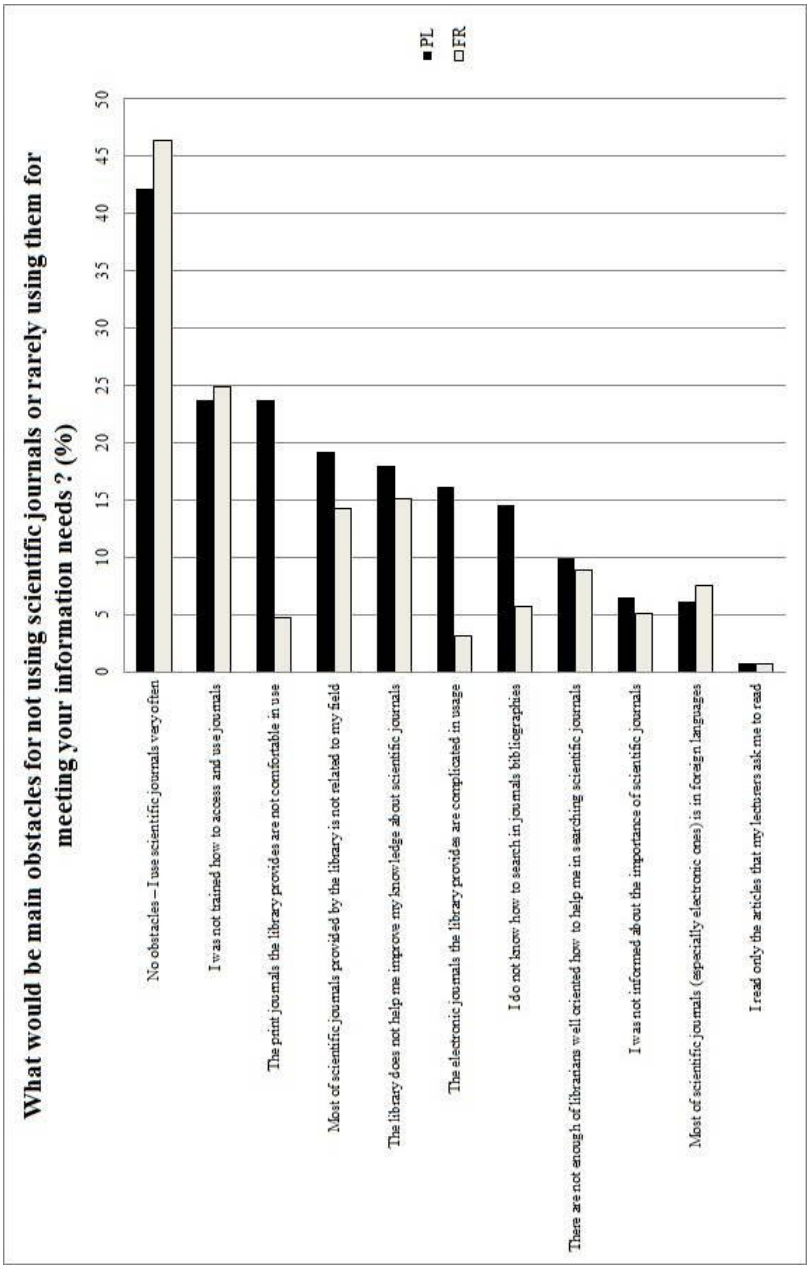
Category 2. Technical problems. “The printed journals library provides are not comfortable in use”. This is perceived as obstacle for 23,75% of Polish and 4,3% of French respondents. This problem might be related to journals format – for some students it seems more comfortable to read electronic journals; as well as to access – to read printed journals one has to come to the library

building because she/he cannot access them remotely. Moreover, even in the library building, journals are very often hidden in the store and only the current issues are available in the reading room. This obliges users to make a demand each time they want to use archive volumes. Besides, journals are generally not lendable (they can be only read in the library), what can be also perceived as uncomfortable.

"Most of scientific journals (especially electronic ones) are in foreign languages". Although this was seen as an obstacle by the minority of respondents (6,13% - Poland; 7,57% - France), for certain students it might be an essential barrier against broader insight into international science.

The most important obstacle, according to the results of this study, is "most of scientific journals provided by the library are not related to my field" and it was marked by 19,16% of Polish and 14,19% of French respondents. This is the problem linked with the library acquisition policy as well as with the cooperation with the faculties. And it should be further investigated.

The obstacle "I read only the articled that my lecturers ask me to read" was hardly indicated, by two Polish and two French respondents.



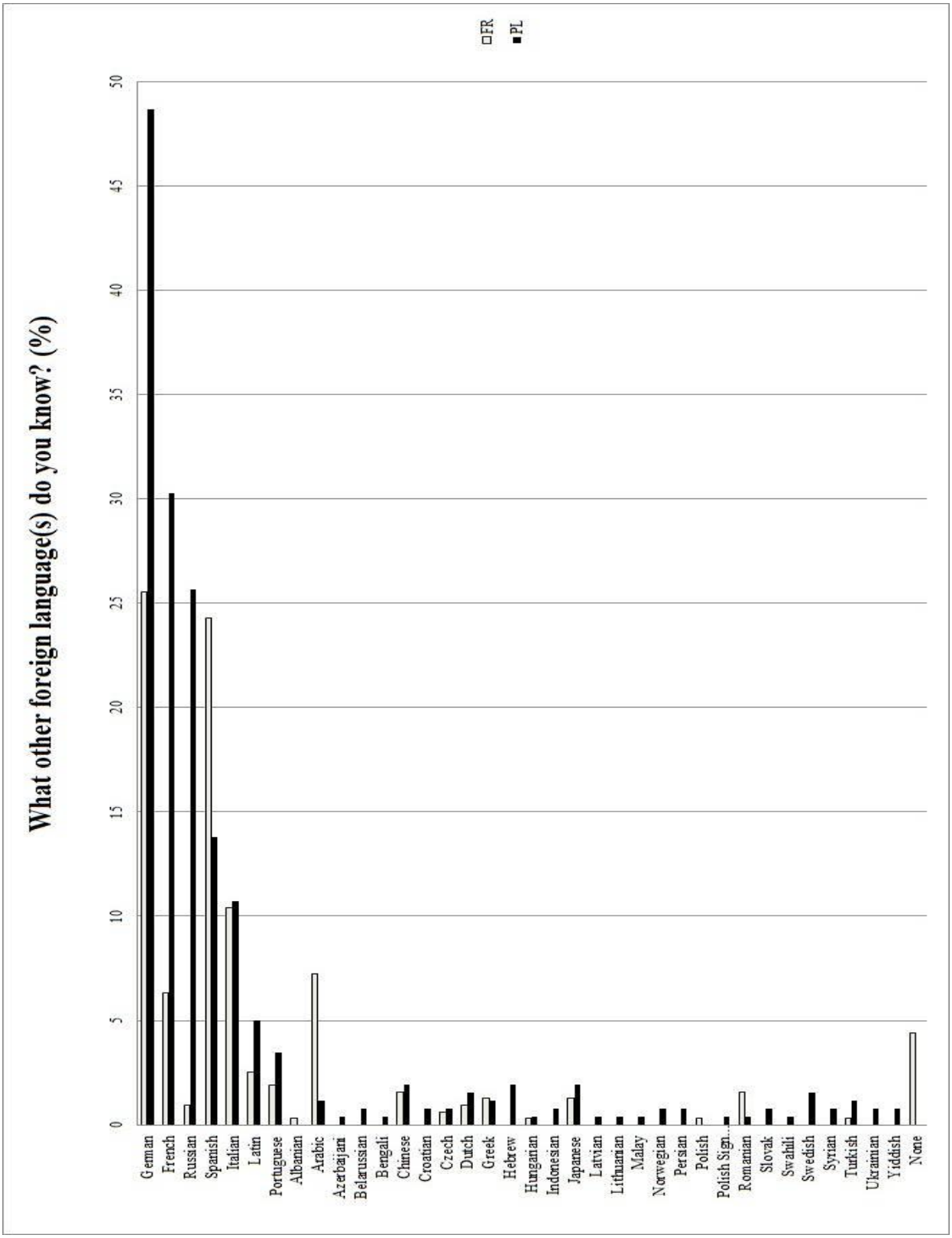
Graph 22 – Obstacles for not using scientific journals

2.8.23 Knowledge of other foreign languages

In the case of this question we can observe how broad knowledge of foreign languages, other than English, doctoral students of both universities have. In general, these results go along with the report published by the European Commission (2012), saying that the five foreign languages most widely spoken in the European Union are: English, French, German, Spanish, and

Russian. Keeping in mind that English was a subject of another question and French is a mother tongue for the majority of French respondents in this study, the other languages are presented at high-ranking. Together with thirty-five others, known by doctoral students of both universities.

In the case of France, reflection-provoking can be the fact that 35,96% of respondents skipped the question (18% in the case of Poland) and 4,41% confessed they do not know any other language.



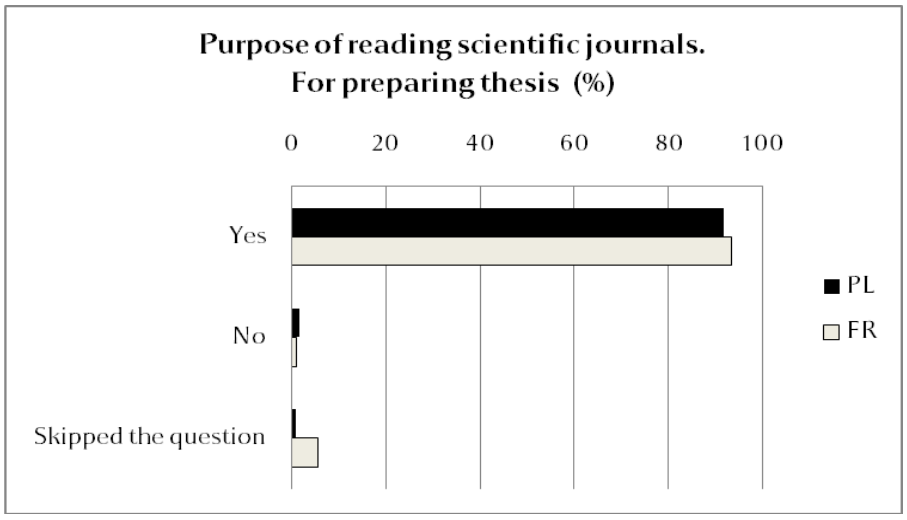
Graph 23 – Knowledge of other foreign languages

2.8.24 Purpose of reading scientific journals

The next set of question investigates the different purposes of scientific journals reading. The results are presented on Graphs 24-29.

2.8.24.1 For preparing thesis

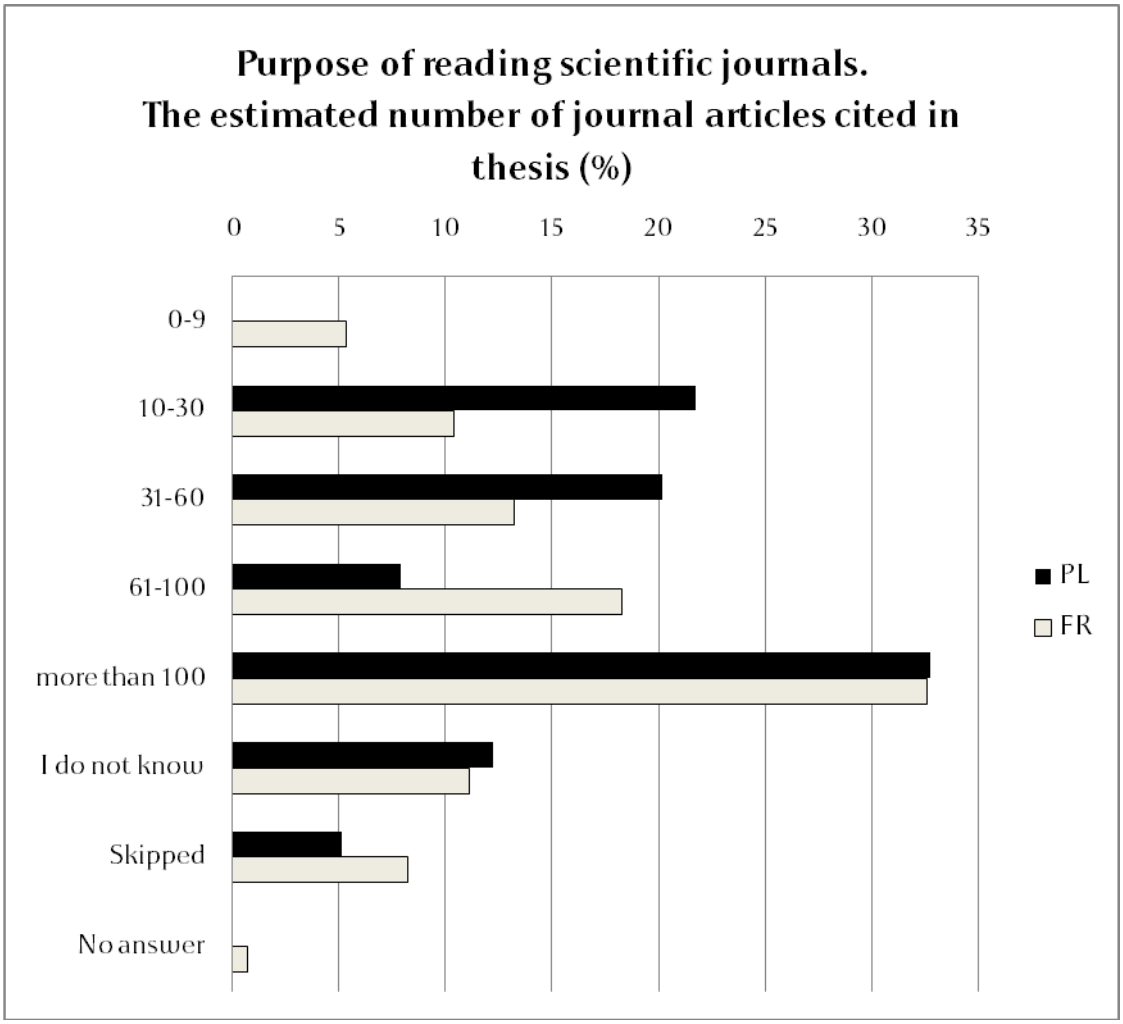
The most obvious reason of reading scientific journals seems to be a doctoral thesis. And, evidently, the majority of both French (93,37%) and Polish (96,93%) students provided a positive answer to this question.



Graph 24 – Purpose of reading scientific journals – for preparing thesis

2.8.24.2 The estimated number of journal articles cited in thesis

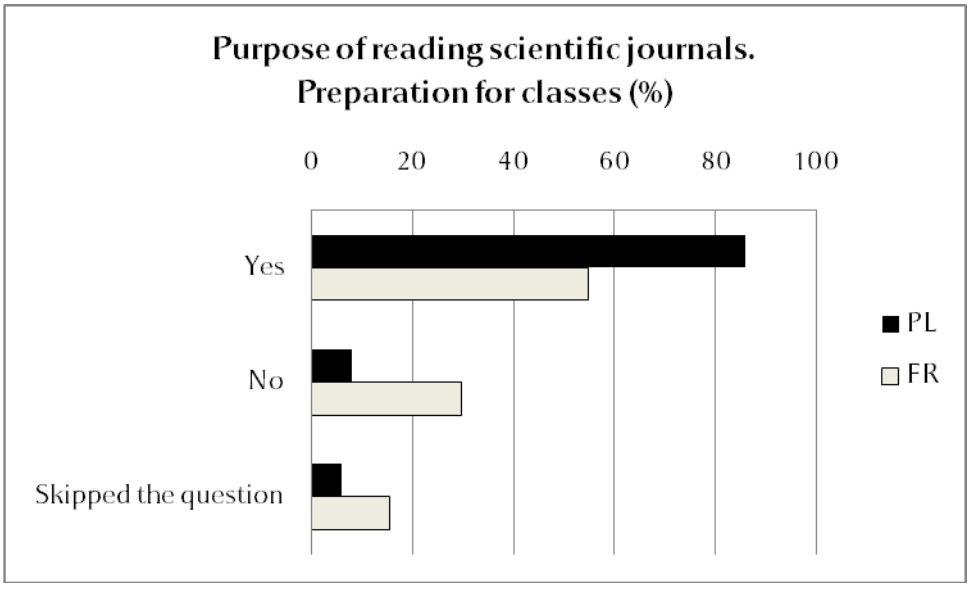
Here, in the case of both groups of respondents the option „more than 100" was the most popular (32,80% - Poland; 32,61% - France). In general, doctoral students are going to include scientific articles into the references of their thesis, and there is a group of respondents (12,25% - Poland; 11,11% - France) who could not estimated yet the number of cited articles. Of course, the fact that the number of articles cited in thesis might differ, depending on the field of research, should be taken into consideration. Generally, in Humanities and Social Sciences this number might be the biggest.



Graph 25 - Purpose of reading scientific journals – the estimated number of journal articles cited in thesis

2.8.24.3 Preparation for classes

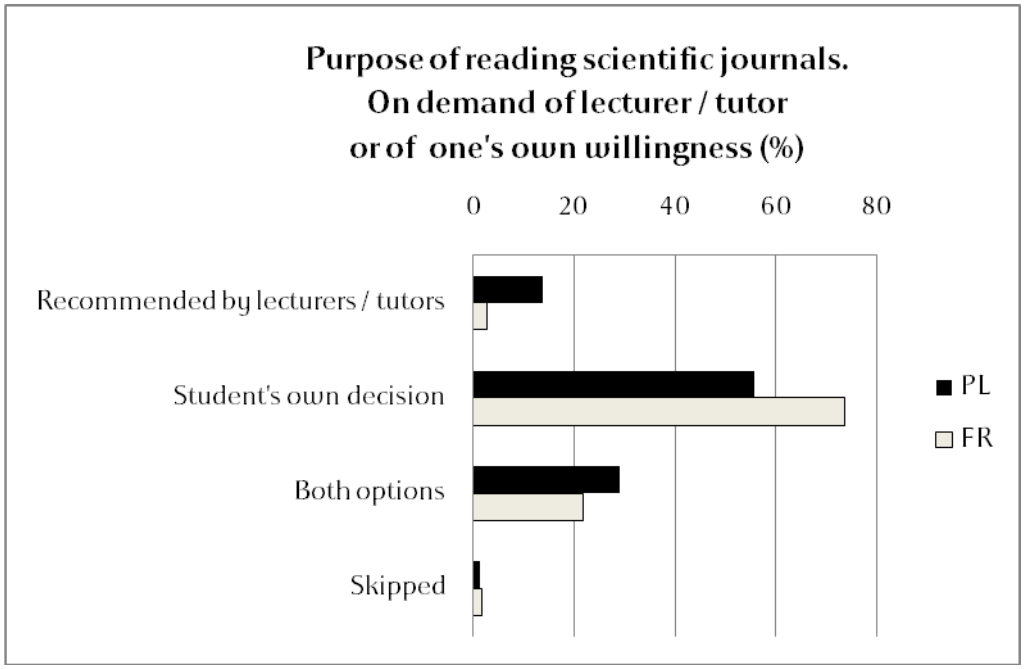
The majority of both French (54,89%) and Polish (85,82%) respondents reads scientific journals for preparation for classes. In this case "the classes" mean doctoral seminars, etc., and no the classes provided by doctoral students for bachelor or master students.



Graph 26 - Purpose of reading scientific journals – preparation for classes

2.8.24.4 Does your lecturer / tutor ask you to read certain articles or do you do that of your own will?

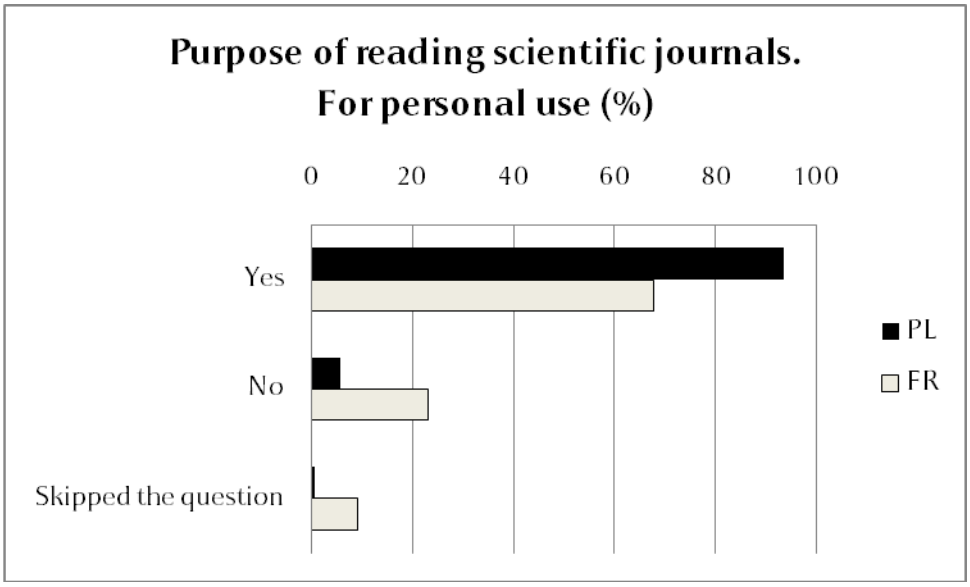
When doctoral students taking part in this study prepare themselves for classes, the majority (55,81% - Poland; 73,56% - France) is searching the articles on their own and does not wait till the lecturer indicates the references. However, more than one fifth of respondents at both universities (29,01% - Poland; 21,85% - France) declared that they rely both on their own searching and on lecturer's / tutor's indications.



Graph 27 - Purpose of reading scientific journals – does your lecturer / tutor ask you to read certain articles or do you do that of your own willngness?

2.8.24.5 For personal use

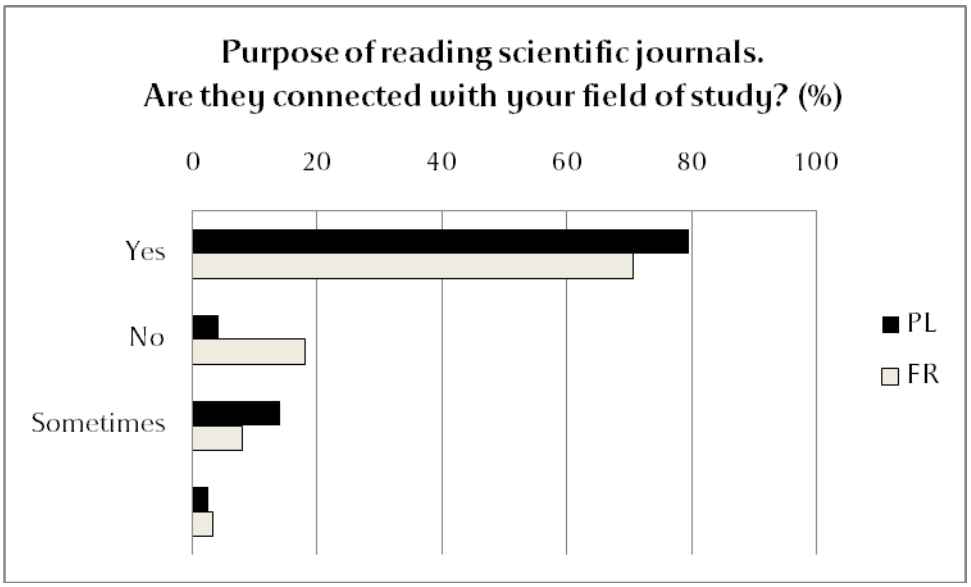
The majority of doctoral students (93,49% - Poland; 67,82% - France) reads not only the scientific journal directly needed for the thesis, but also broadens intellectual horizons by reading journals for personal use.



Graph 28 – Purpose of reading scientific journals – for personal use

2.8.24.6 If connected with the field of study

However, even if the journals read for one's personal use are not used for the doctoral research reference list, they still are connected with the field of study. That confirm 79,51% of Polish and 70,70% of French respondents. These results might be also a point in discussion how intellectually engaging the doctoral research is and how difficult it is to go beyond its thematic.



Graph 29 - Purpose of reading scientific journals - connection with respondents' field of study

2.9 Major contributions of the study

This study results in a number of contributions. To discuss them in a clear way, the numbered order is provided.

1. This is the first study in its kind. The examination of LIS literature revealed that no comparative study between France and Poland has been realised to date, not only in the domain of IL and doctoral students, but generally in LIS.
2. This is also the first comparative study realised during the implementation of Bologna Process. A reminder: Bologna Process aims, generally, at unification of European Union higher education, transfer of knowledge, and adoption of qualification frameworks of the European Higher education Area (Council of Europe, 2010).
3. In France, academic libraries users' studies are developed but in Poland this domain is still not spread enough and the so-called studies often do not go beyond the simplest statistics related to library visits or number of loans. This study aimed to be a major contribution to the domain in both countries. In the case of France it contributes to existing research and works in library field, presented for example during the conference in Lyon in 2010 (Denecker & Durand-Barthez, 2011), however it still remains unique.
4. Not only the study itself but also the review of literature presented in this thesis contributes to French and Polish research in the IL domain. The comprehensive image of IL concepts and approaches applied in both countries can be useful for potential next comparative studies.
5. As Wilson (2000) writes, "information research (...) must be related to the organisations or organisational sub-units in which information work is practiced". The wish for this study is that its findings and conclusions would find application. Naturally, it might be realised easier in the case of Poland as the field of investigation (i.e. University of Warsaw) is a workplace of the study's author.

6. This study identifies also the issues that might be considered and implemented by libraries. The main one is the reinforcement of the role and importance of IL. The existing offer of IL instructions should be improved and adjusted to doctoral students' needs. Besides, in the long term, library authorities should advocate for implementing IL into strategically plans of universities and, what comes along, for integrating IL into curriculum (details of this process will be described in Chapter 4), according to the guidance of Bologna Process Qualifications Framework for European Higher Education Area, the so-called Dublin Descriptors (Bologna Working Group on Qualifications Framework, 2005; Council of Europe, 2010).
7. Thanks to the comparison method applied in this study, certain similarities and differences on the understanding, application, and realisation in practice IL concept in both countries were identified.

2.10 Limitations of the study

Even though this study was conducted with a sincere regard to methodology that was precisely considered and chosen with reference to the literature of the IL subject as well as to the other LIS works, there are certain limitations that might be perceived as weaknesses and have influenced on results, findings, and contributions of this study. These are as following:

1. The response sample can be perceived as too small for being representative for both universities. To recall: 14,73% for University of Warsaw and 15,70% for Universities of Lille. However, it is hard to force respondents to take part in the study and to influence on their unwillingness of taking part in the survey, although the participation was recommended by doctoral studies authorities and administration. In the case of this study, the goal was to investigate the biggest possible number of respondents. Regarding the number of respondents from the percentage angle might provoke doubts, but regarding the

real numbers of respondents (261 for the University of Warsaw and 317 for the Universities of Lille) provides 578 students who showed their wiliness to contribute to this study and decided to consecrate their time.

2. The field of studies partition can be disputable. In this study respondents were asked to indicate their domain among: applied sciences, humanities, pure sciences, and social sciences. This might provoke questions, especially in the light of other studies. Generally, disciplinary differences are complex and important. Especially that there are differences in the structure of knowledge and research techniques between sciences. They affect teaching methods and student learning (Entwistle as cited in Sanderson, 2011). As Hjørland (cited in Talja & Maula, 2003) deduces, domains differ in their theoretical views, paradigms, and epistemological assumptions, thus also in their general relevance criteria. For Collins and Jubb (2012) even within one discipline the sub-groups can be identified. The study conducted by Mierzecka-Szczepańska (2012) confirms this hypothesis, too. Moreover, even at local level, the habits of colleagues or collaboration can have an effect upon information behavior. And East (2005) in his study noticed that researchers in arts and humanities (doctoral students were included into this group) need more effective IL programmes. Talja and Maula (2003) are of the opinion that analysis of the field must be narrower than for example “humanities” or “applied sciences” research. That is why for their research they chose a small sample of total 44 persons representing literature and cultural studies, history, ecology and environmental sciences, and nursing science. They compared fields with different communication practices. This small sample provided a basis on which authors might conduct a future work.

3. In the case of this study, the first in its kind it seemed more appropriate to start from the wide disciplinary level. The potential future work (describes in details below in section 2.12) can consider narrowing and more specific partition of domains.
4. The question if universities in Lille and Warsaw are comparable can be posed. There are indeed many differences (geographical, economic, developmental, or educational) but both universities are located in the European Union, both are implementing the Bologna Process and are the members of the European Research Area. Also, in both countries the directory of information resources available at the universities is similar. As nowadays the scientific publishing and communication is international. Thus, at least from this reason both can definitely be the subject of comparative study.
5. Predominance of quantitative social survey method might also be the cause of doubts because, as Wilson (2000) writes, in that case "collective data becomes a substitute for thinking about the problem". That is why, in order to avoid calling methodology of this study into question and to reinforce the methodology quality, other methods, like GT and observations were applied as well.

2.11 Implication of the study

On the basis of this study results the following implications are suggested for librarians, university libraries administrators, faculty, and university administration:

1. This study might be helpful for librarians to understand users' needs and to define the gaps in the library offer. It highlighted also the importance of the IL education at the university forum.
2. The findings of the study present a set of implications that might be considered by the policy makers as well as by the library and university administrators.

3. There is a need of professionalization of pedagogical role of librarians. Training the trainers should be organized for librarians to allow them acquire necessary pedagogical skills and tools. The self-assured librarians will be able to prepare more attractive IL education offer and promote it at the university forum. Librarians need to become perceived as educators within their university (Torras & Saetre, 2009a; Williamson, Bernath, Wright, & Sullivan, 2007).
4. The IL education offer should be developed and adjusted to particular needs of doctoral students. The trainings for each discipline should be elaborated.
5. There is a need of enhanced promotion of library services and library's educational offer. However, it cannot be done without realisation of activities described in point 1 and 2.
6. The results of this study can also pose a critical reflection on libraries acquisition policy related both to scientific journals (printed and electronic) and tools, like: multisearching systems, bibliography management systems, or e-learning platforms.
7. Since the beginning of this research, much has already changed for better in IL domain in Poland. Polish IL has developed significantly, mainly thanks to the IL Committee established in January 2011 within PLA. However, the initiatives undertaken by IL PLA Committee have been focused so far primarily on public and school libraries (details were described in Chapter 1 (sections: 1.4.2 and 1.5). The initiatives dedicated to academic libraries aimed at helping librarians in developing their knowledge and IL competencies and at developing IL education offer for bachelor and master students. Thus, it can be concluded that even if much has been already done, there is still a lot of work to do for doctoral students and this study has ambition to be the basis for future development in the subject. This can be facilited by

the fact that the author of the study is a co-founder of IL Committee and a member of IFLA IL Section Standing Committee.

2.12 Further studies directions

This research study suggested a number of recommendations and identified key-implications and conclusions. Besides, it enabled to indicate the areas for future research that might be developed, keeping in view the following issues:

1. Grounded theory research. A potential study on IL can be conducted, applying the whole process of work with GT. However, from the reasons mentioned before in section 2.4.3 (Grounded theory), it would be recommended to realise such study by a group of researchers and not by an individual one.
2. An in-depth and cross-disciplinary study research might be conducted to investigate complex relationships between field of study and information needs, taking into consideration all described earlier differences between fields of study.
3. There is a need of work on the universities forums, aiming at legitimisation of IL and its implementation into university strategies and curricula in both countries.
4. To do so, the cooperation between librarians and faculties, and common advocacy for IL at the university administration level is absolutely required.
5. To enhance the research on IL and information users in both countries, a “library research groups” might be established to guarantee studies systematically conducted with regard to the currently applied social sciences methodology.
6. This study revealed that libraries must develop their IL education and be more focused on particular fields of study instead of preparing one, uniform offer. This finding goes along with the opinion of Marie-Laure

Malingre and Alexandre Serres (2011) who underline that the uniform IL education for doctoral students does not exist analogically to information practice that differs from one discipline to another.

7. As this study investigated doctoral students, it seems natural that the similar studies focused on bachelor and master students might be conducted to provide an overall view of relationship between students, scientific journals, and IL.
8. One of suggested here postulates of potential future work was IL implementation into university strategy and curriculum. Thus, after realization of these postulates, it would be recommended to investigate once again if and how this significant change in perception and role of IL influences information users.

Chapter 3. Designing information literacy education

Shirley Behrens (1994) in the mid of the 1990s. investigated the existing literature on IL. At that time she concluded "although it has become apparent that information literacy is regarded as a combined librarianship and educational issue, at present the literature remains essentially confined within the LIS discipline" (p. 320). After almost twenty years not much has changed in this domain – still, there are many publications on IL edited every year, but the majority omits the pedagogical issues of IL, leaving the readers (who are potential IL trainers) with many concept and ideas and little pedagogical help. Also in French and Polish literature, with increasing number of IL publications, the pedagogical support for librarians does not increase, unfortunately. One can have an impression that every author advocates for implementing IL programmes, but (almost) none advices how to do it in practice. But IL is about "learning how to learn" as Susie Andretta (2006) writes, so it is not just the library issue, but it has also educational and pedagogical role as a component of the learning process.

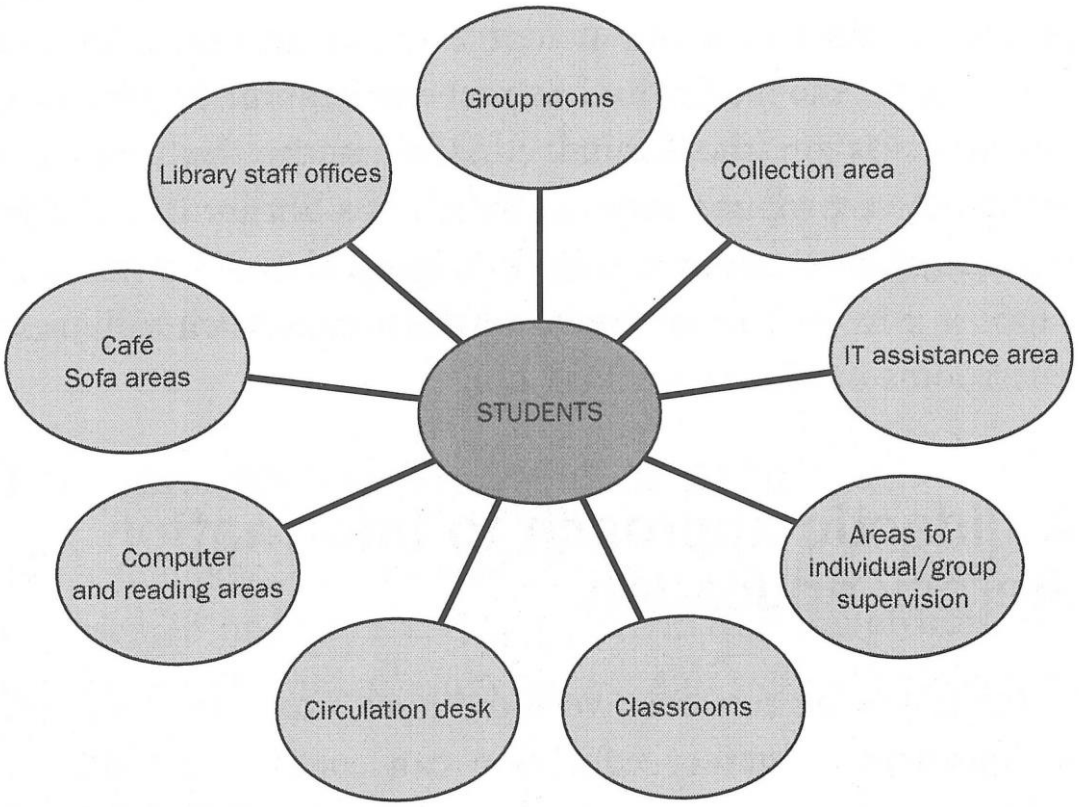
In this chapter the educational role of librarians will be discussed, necessary for drafting the IL training programme for doctoral students that is a theme of the next chapter. The students' attitudes and expectations will be described, and the pedagogical issues that should be taken into consideration while planning an educational programme in the domain of IL. Some didactic models that can be useful in IL training as well as some learning theories will be introduced.

As it has been underlined several times already, the academic librarians and faculty members should became educational partners , so the role of librarians must change as well. However, the librarians to become the teaching librarians or trainers or educators[49] must feel their pedagogical role and be qualified in this domain.

[49] The terms: teaching librarians, educator, and trainer will be used synonymously.

Torras and Saetre (2009) advocate for building up a common educational platform for IL in higher education where academic library will be a learning centre and a learning organisation consisting of both formal and informal arenas: on the one hand students can learn themselves in different spaces and in different ways, and on the other hand – they can benefit from user support services or user education programmes offered by librarians.

Figure 9. The library as a learning centre (Source: M. C. Torras & Saetre, 2009, p. 15).



3.1. Students' attitudes and expectations

The present thesis concentrates on doctoral students. These are postgraduate students whose supervision, according to Torras and Saetre (2009), "does not

only require information expertise from the librarian, but also academic qualifications in a discipline" (p. 61). The authors notice also that postgraduate students are engaged in a more comprehensive, demanding, and long-term research process.

However, even postgraduate students of the third cycle of studies feel uncertainty at particular stages of their research. Uncertainty is an emotional state, Kuhlthau (as cited in (Torras & Saetre, 2009) describes it as:

> (...) a cognitive state that commonly causes affective symptoms of anxiety and lack of confidence. Uncertainty and anxiety can be expected in the early stages of the information search process. The affective symptoms of uncertainty, confusion, and frustration are associated with vague, unclear thoughts about a topic or question. As knowledge states shift to more clearly focused thoughts, a parallel shift occurs in feelings of increased confidence (p. 71).

The teaching librarians should be aware of this kind of emotional and psychological states and support students in research process and developing skills to overcome uncertainty. This is also a challenge for librarians who till now have provided the source-oriented library instruction and they will have to face the user- and process-oriented IL trainings. But this is also a part of "professionalising the role of library practitioners" that Torras and Saetre (2009) propose in their book. The task is hard as many librarians still state sometimes that everything around them changes and must change, but they - librarians - do not have to (Bubel, 2012, p. 23).

Writing about the skills that librarians should have, it is good to design a general view of students' expectations. As Maria Bosacka (2012) describes, citing several researches exploring the students' attitudes and behaviour, students require the transferred knowledge to be attractive, practical, provided in an understandable way and easy ingested. Thus, the university is sometimes compared to a supermarket where the goods are easy accessible

and the studies became a peculiar service – a student can acquire this service on the market. In fact, the future employer demands this service, i.e. the higher education diploma. Besides, according to the research of Swiss librarians, Marinette Gilardi-Monnier and Isabelle Maurer (as cited in Denecker, 2003), students are not motivated to participate in educational activities offered by libraries, especially if the activities are not compulsory and organised for groups and not individually. The students prefer the individual approach – they feel that this type of training is tailored for their individual needs and allows them to get the answer immediately. This attitude on one hand confirms the demanding attitude of students and on the other hand highlights the necessity of embedding the IL trainings into curriculum and making it compulsory.

Fabrice Papy and Sophie Chauvin (2005) shared their observation made during the research at the Library of University Paris 8 and works on "Visual... Catalog". According to them, the university library with all multitude of dimensions presents itself to users as a very complex place. For the majority of users the library remains the place where the rules of knowledge organisation are hardly known or not known at all. The library has to face the information overload, develop its offer and services, introduce e-resources, but at the same time still preserve and present knowledge what has been its main goal since ever. The students are victims of information overload (fr. *l'abondance documentaire*) and they prefer to search sources that are the easiest in access and do not require to visit the library. Thus – the Internet. Even the automation of card catalogues has not changed much and OPACs are still used in majority only to search for particular books and not for information in a wider sense. On the other hand, librarians should be aware of the importance of catalogues. Even though the library catalogue is not the only source of information in the library, it still remains the major one for users as the most important and the most frequently used point of reference. Hence, it gives many possibilities for librarians to build on the

OPAC the more developed information tools and to provide the complex IL trainings.

Reg Carr (2007) concludes that the librarian of 21st century should be the "listening librarian" who is able to understand what users really want, and who can make a meaningful progress towards providing information services. Carr also proposes a set of pragmatic advice that can be helpful. He advocates for deep, complex and regular users' studies that should be an integral part of a professional approach to library service planning. He often refers to the studies conducted by Tom Wilson. He emphasizes also that every effort should be made to meet the expressed wants[50] of users.

3.2. Pedagogical considerations

"In IL education, the responsibility for learning is shared by the faculty, the library, and the student" (Skagen et al., 2008, p. 88).

As mentioned earlier, to introduce IL education programmes, librarians must acquire pedagogical skills and become teaching librarians. The big number of academic librarians does not have an educational background and has never given classes. Thus, it is necessary to profesionalise their educational role and help them believe that they are able to become regular teachers.

In this section the main learning styles and the pedagogical basis that can be useful in IL education will be discussed, basing on the international literature that describes IL from the educational angle.

3.2.1. Constructivism

Constructivism is recently the most significant trend in pedagogical reflection, having its roots in the US. It refers to a dynamic relation between teaching styles (i.e. how teachers teach) and learning styles (i.e. how students learn). The Associations for Constructivist Teaching publishes an Open Access journal "The Constructivist"[51].

[50] Carr does not use the terms "needs" or "expectations". He prefers the term "wants".
[51] Available at: https://sites.google.com/site/assocforconstructteaching/journal [Retrieved: 31 May 2013].

The main idea of constructivism is that people are learning by interaction with environment, they are constructing actively their knowledge, basing on the knowledge possessed earlier to reach more advanced levels of understanding. They are not registering information, but they are building knowledge structures on accessible information. Learning is an active process of discovery and categorization and can be achieved by reflective thinking to solve problems through analysis of lifelike problems and potential alternative solutions.

The principles of constructivism can be formulated as following:

(1) the problems undertaken by a teacher should be suitable (and attractive) for students;

(2) the teaching process should be organised around some basic and not detailed issues (i.e. problems, questions, or situations). Students are engaged more in issues presented globally;

(3) the students' point of view should be searched and appreciated (the teacher should be aware of students' common knowledge, i.e. personal point of view and opinions).

The "constructivist teacher" should inspire students and accept their autonomy and initiative in learning process. The teacher acts rather as a guide than a dispenser of information. She/he should create an atmosphere enabling students to ask questions and to project undertakings that would answer these questions. It is important that teacher, while giving exercises, uses the vocabulary of cognitive sciences, as for ex.: "classify", "organise", "analyse", "make a hypothesis", "create", "construct", etc.

Modern information technologies are perceived as important tools of inspiration for the cognitive approach to education. And inversely – constructivism is perceived as a conception stimulating the use of information technologies (Dylak, 2000).

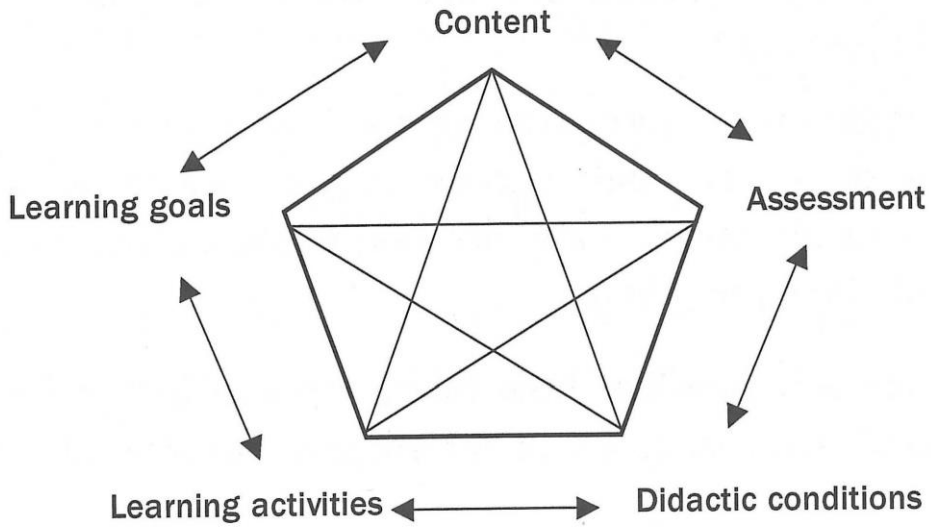
3.2.2. Pedagogy of the question

Paulo Freire, a Brazilian educator and philosopher is an author of the pedagogy of the question theory. He started to construct his theory from the statement that in teaching, questions have been forgotten and that today teaching and knowledge consist of giving answers and not asking questions. What is wrong as all knowledge begins from asking questions (here, Freire refers to Plato). He calls this phenomenon "authoritarian education" or "pedagogy of answers" as the contrast to the pedagogy of the question that can be described as a critical pedagogy which gives the learner control over the learning process, forces and challenges the learners to think critically and to adopt a critical attitude toward the world (Andretta, 2006; Freire & Faundez, 1989). Susie Andretta (2006) sees IL as a new pedagogy of the question.

3.2.3. Didactic relation model

Torras and Saetre (2009) put at the heart of their approach to user education "values, such as the belief that education should be based on open, reflective, and critical dialogue between students and educators" (p. 4). And they advocate for constructivism and a process-oriented approach to IL education (that will be described later in this section). In their book they introduce the *didactic relation model* (see Figure 10) developed in 1978 by Norwegian educational researchers Bjarne Bjørndal and Sigmunt Lieberg.

Figure 10. The Bjørndal and Lieberg's didactic relation model (Source: M. C. Torras & Saetre, 2009, p. 33).



The *didactic relation model* presents the crucial factors and their interaction in planning education. It is intended as a tool for analysing, planning, and reflection. It provides a framework on which librarians can base to identify and determine the factors that must be taken into account while planning an IL educational programme. This model builds upon the following didactic categories:

(1) didactic conditions: student conditions, teacher conditions, administrative conditions

(2) learning goals

(3) content

(4) learning activities

(5) assessment.

It is worth highlighting that this model is dynamic and all categories are interrelated and can interact in different ways.

In IL context, in Norway the *didactic relation model* was used for design the online tutorial Søk&Skriv (eng. *Search&Write*) – a common initiative of the University of Bergen Library, Bergen University College Library, and Norwegian School of Economics and Business Administration. The tutorial aims at increasing students' information and digital literacy. And the Norwegian librarians found the didactic model very helpful for planning IL courses and for collaboration with faculty to incorporate IL education in the curriculum (Skagen et al., 2008).

In Poland, IL Committee working within PLA advocates for using this model as well. Its premiere took place in September 2011 during the IL Training the Trainers workshop for academic librarians held by Maria-Carme Torras y Calvo from Bergen University College Library, one of the authors of publications cited above.

None application of this model in France has been found.

In general, didactic models are advantageous – they allow initiating a didactic reflection and, together with concepts and tools, they facilitate the design of IL programmes. If a library adopts a didactic models, it helps also communication between trainers as everyone knows the common didactic foundations.

The use of didactic model has also one more purpose: it introduces a pedagogical vocabulary, so simplifies communication and cooperation with faculty. As Torras and Saetre (2009) enumerate, this model facilitates the following teaching aspects:

(1) it sorts out the most important factors/categories in teaching

(2) it shows that planning is part of the teaching

(3) it makes the information professional[52] aware of the fact that the planning cannot totally dictate how the teaching will pan out

[52] For Torras and Saetre the term „informational professional" is synonymous with „librarian".

(4) it makes the information professional aware of the fact that there is no single category that is more powerful than any of the others – any decision regarding one category will affect the others.

3.2.4. Problem-based learning

Another pedagogical theory which is worth consideration is a problem-based learning (PBL). PBL began in the 1960s with roots in medical education, and has been developed especially in the UK and the US. PBL moves away from a focus on locating information sources (well known from a traditional library instruction) towards knowledge construction. It focuses on synthesis, application and use of information in a problem context (Diekema, Holliday, & Leary, 2011). This is a "close to life approach", student-centred, using authentic, real-world and cross-disciplinary problems, creating learning opportunities based on everyday, real-life situations (Diekema et al., 2011; Macklin & Fosmire, 2004). The aim of PBL is to design a deep analysis helping improve critical thinking skills by applying the students' own expertise and experience in data collection, analysis, and formulation of solution. As Maclin&Fosmire (2004) state, PBL can help in "turning otherwise boring lectures into dynamic learning experience" (p. 48).

PBL needs a change in the role of trainer. IL education shifts from a tutor-centred learning towards a facilitator role and student-centred education. This is one of pillars of constructivism (Andretta & Cutting, 2003). And the reflection is a central activity in learning understood as a constructive process (Torras & Saetre, 2009). The constructivist approach to teaching (as mentioned before) is based on creating an interest in new knowledge by building on previous experiences (Macklin & Fosmire, 2004). PBL and constructivism are strongly related to process approach, described earlier by Torras and Saetre (2009). The process approach is set against a transmission approach to teaching and means an active involvement of students in the process of construction meaning.

> Students should engage in issues and projects that involve them in raising questions, seeking information from a wide variety of resources, changing their questions as they learn, identifying what they need to know more about, demonstrating what they have learned, and sharing their new understandings with a community of learners (Kuhlthau, 2004, p. 163).

This allows enhancing student learning and, what comes afterwards, to develop IL. Diakema et al. (2011) recommend PBL as a potentially good method for IL education, that gives a sociocultural approach and can be a good way to introduce IL especially to "students who think they already know how to search for information effectively" (p. 263).

What Torras and Saetre (2009) call "a professionalisation of the educational role of academic librarians", Andretta, Pope, & Walton (2008) call "the pedagogical awareness" that librarians need to be equipped with. Irrespective of the term applied, for many authors it is evident that this is the only way to "enhance students' learning and collaborate effectively with faculty" (Andretta et al., 2008, p. 49). The collaboration with faculty has been already mentioned in the Literature Review chapter but will be also further discussed in section 3.3 of this chapter.

3.3. Collaboration with faculty members

All instruction librarians will recognize
that there's a major gap between the
"should work together" and the reality of
most institutional situations.
The gap, of course, is the crux
of the problem

(Farber, 1999, p. 230).

3.3.1 The need of collaboration

Before starting the discussion on library-faculty cooperation, it is good to reflect on general and universal elements of each collaboration. According to Cook (2000), there are three basic constituents:

(1) Collaboration's purpose is to "achieve common goals"

(2) Collaboration is supported by a "well-designed" structure

(3) Collaboration is "mutually beneficial".

University-library cooperation[53] has a long tradition. The library, a centre of academic information resources, has been always cooperating both with university departments and administration on several levels, such as: shaping collection of the main and faculty libraries, enhancing the lending regulations, organising library instruction, etc.

Christine Bruce (2001) attempts to classify faculty-librarian partnership and distinguishes five types of partnerships: (1) policy partnership, (2) research partnership, (3) curriculum partnership, (4) higher degree supervision partnership, and (5) academic development partnership. According to Bruce, in each of these partnerships there is a place for including IL. For the purpose of this thesis partnership aiming at integration IL into curriculum will be the main focus. However, as it will be discussed below in this section, this integration requires frequent changes in other sectors of university work and, to obtain that, other types of partnerships are needed as well.

In the USA there were even annual conferences organised, dedicated to the theme of faculty-library cooperation: Faculty Involvement in Library Instruction (started in 1971) and Working with Faculty in the New Electronic Library[54] (started in 1973). However, even in this country, perceived as a precursor of all new trends in LIS, the library instruction at the beginning of the 1970s. was nothing more than a bibliographic instruction joined with library guided tour. At that time no one considered library as a teaching unit of the university in the sense that it is considered and approved nowadays. As recalled by Farber (1999), in the mid 1950s. and at the beginning of the 1970s. there was a discussion on the greater effectiveness of library instruction in the case of making it an integral part of course content in all

[53] The terms "cooperation", "collaboration", and "partnership" will be used synonymously.
[54] In Europe the discussion on "electronic library" was hardly started and not too developed at the beginning of 1970s.

subject fields and regular teaching. As well as suggestions that librarians should convince the faculty of the potential role of the library. But a real "IL boom" started in the US in the 1980s. Farber calls it "growth of the bibliographic instruction movement". The libraries started to play an active role in the teaching-learning process and faculty attitudes towards library started to change as well, and faculty started to accept librarians as teaching colleagues. However, as Farber adds, "not fully accepted in all cases, but at least as colleagues to teach and work with" (p. 232). Both groups started to work together on planning assignments and the library instruction became course-related and went towards IL education.

Collaboration between library and faculties appears essential and is the best way for IL education to succeed. As IL is perceived in academic context wider than just a library matter, helpful in all domains, and teaching how to be an effective life-long learner, the partnership with faculty and, more general, with other university stakeholders is necessary. Besides, such collaboration is a natural approach to academic teaching and the isolation has a bad influence on the research process. Faculty members are experts in the discipline and librarians are experts in accessing information. The amount of information grows quickly, but also the information access methodology changes. This provides an opportunity for librarians to implement formal, curriculum-integrated IL programmes and become part of academic teaching staff (Cook, 2000; Raspa & Ward, 2000). In fact, the ideal and the most desirable solution is to integrate IL into institution's mission, strategy, and/or educational goals. As it was mentioned earlier, such approach gives IL an additional value and results in perceiving IL as institutional (academic) and not only library's theme.

The successful collaboration is a first step for understanding the importance of IL at the institutional level and a basis for implementing it into curriculum. In the most cases this partnership will provoke changes in institutional policy, reflection on teaching and learning approaches and attitudes of faculty and students, as well as will provoke some resources

arrangements, related to: budget, staff, facilities, and time (Virkus & Metsar, 2004). The partnership between faculty and library helps also adapt the most convenient pedagogical methods, responding to students' needs (Lamouroux, 2006). For example, collaboration on students' assessment can be beneficial. Students' progress in subject field can be assessed dual: from the angle of improving knowledge of the domain and from the angle of developing information skills that help acquire this knowledge. Double assessment can result in a deepened reflection on research and writing activity.

For Torras and Saetre (2009), advocating for professionalisation of pedagogical role of librarian, only a common understandings of academic pedagogical foundations make possible the legitimisation of IL. For them cooperation is illustrated not only by IL education provided at departments, but first of all by alignment and accordance of library goal and strategies with those defined at the university management, faculty, and discipline course levels. Oakleaf (2009) is of the same opinion. This idea is similar to Webber and Johnston's related to information literate university (see subsection 3.3.2). Additionally, Torras and Saetre suggest developing a fomalised IL education programme. In other words: preparation of a clear IL documentation as it can help in contacts with faculty members and in advocating for IL embedding. If the library course goals and those of faculty harmonise, the academics understand easier the need of embedding IL into curricululum.

Librarians-faculty members cooperation is needed at every stage of IL education - from planning a content, by providing the courses, evaluating, promoting, and embedding (Pilecka & Ticha, 2012).

3.3.2 Collaboration in practice

The most adequate way for the beginning is a grassroots librarians's initiative aimed at one department. The project of an IL course[55] for concrete domain should be presented to the department management in presence of a subject librarian responsible for this domain and liaison person from the faculty. The liaison person can be an academic responsible for whole educational process at the department or only for the bachelor, master, or doctoral level, or just a "library friend" – faculty member who earlier was in contact with a library team working on the course content. The library should tend to convince department management to try an experimental IL education and commit itself to provide faculty with the conclusions of the course and the results of students' assessment end evaluation. After finishing the course a detailed report should be prepared and provided to this department as well as to other departments and administration of the university in order to promote the course among other faculties. The crux is to convince management that it is necessary for students to learn how to access and use information, that these skills are interdisciplinary, and that librarians working together with faculty can achieve this goal (Caspers & Lenn, 2000). This description is similar to the example given by Repanovici and Landoy (2007), illustrating the experiences of subject librarians from Bergen University Library who started the implementation of IL at the university from contacting department, talking to the head of teaching and to administration responsible for teaching programmes. They decided together what should be taught, how many hours can be dedicated, and what the expected teaching outcomes are. They started from two/three-hour course embedded into students' timetable (to show that IL course is equal to any other teaching). The first part of teaching was held in the library building. The teaching material was planned in accordance with the department head, however the librarian was responsible for teaching and guaranteed the quality and the validity of the IL education.

[55] Prepared according to stages presented in Chapter 4.

This "chain" method is quite time-consuming but seems to be the most appropriate start for institutions that have not recognised yet the importance and need of IL education beyond the library building. Collaboration is also a "network creation" as Jeffries (2000) names it and precise: "to be an effective collaborator, you must learn how to think of yourself as a networker, creating partnership across your campus" (p. 129).

It can be the first step of "working towards the information literate university" (ILU) as Webber and Johnston (2006) named their idea. The authors, inspired by the theory of the learning organisation that "facilitates the learning of all its members and continually transforms itself" (Pedler et al. as cited in Webber & Johnston, 2006), presented their vision of university that requires everyone become information literate (administrators, students, researchers, librarians, and academics). Obviously, in each environment IL demands a different kind of education and support. The Webber and Johnston's idea is not a revolutionary one, it bases on documents and indicators developed by associations like ACRL or SCONUL. These indicators are created from the libraries' perspective and include, among others, :

(1) extent and nature of collaboration with academics

(2) the extent to which IL is embedded in subjects

(3) mention of IL in key documents

(4) development of an institutional IL framework

(5) library representation on key committees.

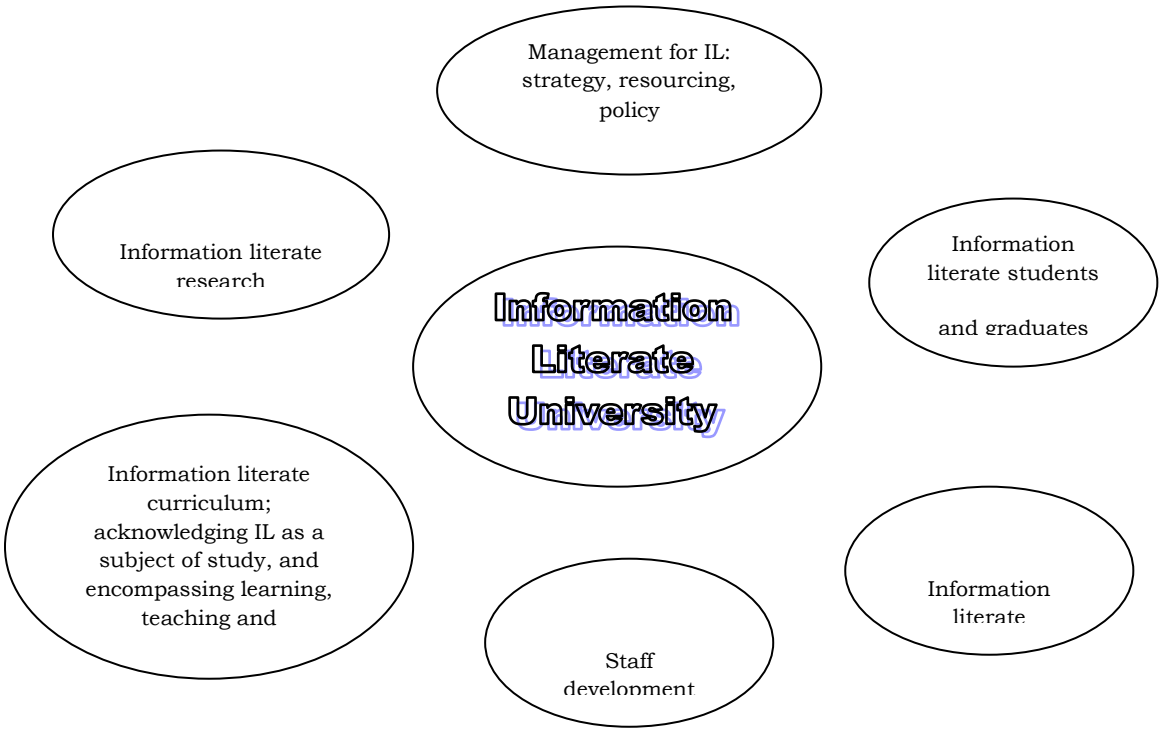
As Webber and Johnston are LIS researchers, they started to build their theory from this angle. However, they highlight that "information literate university does not depend on library activities, and changes to achieve an ILU require more than librarians' intervention" (p. 53). In their opinion, ILU is beneficial for the whole of higher education, creates a space for access and exchange and leads to positive changes. As example, they recall the Centre for Excellence in Teaching and Learning at the Sheffield University –

a platform of collaborative work of academics from different departments that resulted in greater understanding of IL and greater attention of IL at the institutional level. The idea of ILU matches also with ANZIIL framework[56] advocating for extended collaboration within institution that will not be viewed as extraordinary, but valuable and regarded as the norm.

The Figure 11 summarises the components of ILU, discussed by Webber and Johnston.

[56] Accessible at: http://www.library.unisa.edu.au/learn/infolit/Infolit-2nd-edition.pdf [Retrieved: 31 May 2013].

Figure 11. ILU components.



One of the latest examples of ILU can be the Channel Islands California State University. It can be considered as partly ILU. Partly, as it refers to information literate students and graduates. Three IL standards have been determined and included into the university's general education student learning outcomes (Hoffmann & LaBonte, 2012).

All issues discussed above in this section define a big challenge and demand a lot of grassroots work. Both from the librarians' and faculty's part. Probably, as Peter Godwin (2006) states, "staff realise they need librarians in the fight against Googlisation" (p. 38). So, perhaps faculty members are aware that Google and other big web commercial players offering access to not always trustworthy resources threaten studies and research, but are faculty aware that there are librarians who are ready to help and present a

wide range of other, more valuable, tools and databases? Librarians are able to become teaching partners for academic staff, they just need the confidence to teach and the support of faculty.

To conclude, the Jeffries' (2000) Ten Tips for Collaborating are presented in Table 3.1. These suggestions may sound obvious and some of them even humorous, however they can be an inspiration, a specific syllabus of teaching team working on IL education course and preparing itself for the first contact with faculty.

Table 3.1 - Ten Tips for Collaborating (Source: Jeffries, 2000, p. 116-117).

Be interested in faculty research.
Be friendly.
Be courteous and respectful.
Be a promoter of new products, services, and acquisitions.
Be a personal librarian.
Be willing to attend faculty meetings.
Be committed.
Be a good listener.
Be responsive to student needs.
Be knowledgeable.

3.4. Embedding IL into curriculum

Several authors emphasize that the best practice is an embedded[57] IL programme (Virkus & Metsar, 2004). IL should be an integral part of education at every stage. However, at this thesis concentrates on the third cycle of studies, only the embedding into academic curriculum will be discussed.

IL is not just a library matter, but also educational and pedagogical one, affecting both faculty and information professionals (librarians) That is why the embedding IL is required to ensure a full integration into curricula (Andretta, 2006).

The incorporation of IL education into the curriculum is a long and complicated process (Hepworth, 2000). In literature there are many examples describing this process and underlining the challenges and difficulties that must be faced. Even the earlier description of a problem-based learning can give an impression that implementation of IL into curriculum requires almost to change the style of teaching of entire university. In fact, it can be partly considered in that way and here the role of introducing the Bologna Process seems to be a good opportunity to change and adjust the styles of teaching to the needs of modern students. If IL is perceived as a part of educational process (and, in fact, this is the main purpose), it must harmonise with the rest of curriculum. Thus, introducing IL changes also the work of faculty and administration units.

For success and the prove of acceptation and absorption of IL one can recognise the situation when IL is integrated into curriculum and seen by students to satisfy their goals (Hepworth, 2000). During the process of IL embedding the knowledge of librarians will have to extend as well. They will have to not only acquire pedagogical skills, but also familiarize with assessment techniques and statistical software, gain the experience with

[57] The adjectives „embedded", „integrated", "implemented" and „incorporated" will be used synonymously.

developing and delivering content. As Hepworth (2000) writes, "if librarians are actively involved in incorporating IL into curriculum they will probably have to extend their knowledge of those aspects of IL that have not traditionally been the concern of librarians" (p. 30). Thus, when discussing the process of IL embedding we have to take into consideration six factors: (1) library staff, (2) faculty, (3) students, (4) knowledge, (5) infrastructure, and (6) finance. For purpose of this thesis only the substantial and not the infrastructure or financial aspects will be discussed as the purpose of this research is to draft a programme and not to describe the process of technical implementation.

In Europe, the UK was the first country working on embedding IL into curriculum. The idea of IL integration in this country from the beginning had the wider perspective and work of researchers from University of Sheffield iSchool had the impact on national IL policy. For example, Sheila Corral (as cited in Andretta et al., 2008), basing on the ILU theory (described earlier, in section Z.3.1), presented an idea of including IL into the core activities of a university, i.e. education, research and enterprise and writing IL in strategic goals of a university to create an agreed IL policy, ensure cross-faculty awareness, and encourage commitment to embedding IL within the curriculum.

The UK initiatives seems to be the good way leading to an IL success. In the situation when IL becomes a part of the university's strategic and management plan, it gains the importance and starts to be perceived as a serious and challenging issue for all university and not for a library only. As Andretta&Cutting (2003) emphasize, "institutional policies towards IL have a substantial impact on the level of integration. (...) Ideally, integration should operate at institutional and programme levels to ensure a successful and wide-ranging implementation of IL education" (p. 207). However, if librarians want to succeed in IL implementation, they have to become a peer partners for faculty. To do so, they have to professionalise their role of educators. And here the discussion comes full circle and goes back to the

starting point – the professionalisation the pedagogical role of librarians raised by Torras and Saetre (2009).

When the process of embedding IL succeeds it is recommended to test its effectiveness, for example by designing a checklist (Brown & Krumholz, 2002). The assessment and evaluation are very important factors at every stage of implementation of IL education. They will be discussed in details in Chapter 4.

Chapter 4. Information literacy education programme for doctoral students

> *Unquestionably, doctoral learning requires new skills, new knowledge, and a curriculum, a learning environment, and an academic community to support that learning. Advanced information literacy learning does have a central role to play in the doctoral process*
>
> *(Green & Macauley, 2007, p. 329).*

4.1 Introduction

The IL landscape became more complex. The increase of both the quantity of information and the variety of information technologies being made available to researchers can be observed (Benjes-Small et al., 2009). However, the time for library instructions remains the same. How to teach more disposing the same time?

Aleksander Piecuch (2004) rightly notices that nowadays it is not possible to teach everything, so let's teach at least the independence in thinking, decision taking, the ways of information retrieval, its analysis and synthesis, and ways of information processing. Moreover, he suggests strengthening conviction and awareness of necessity of long-life learning and self-improvement.

In this chapter the framework of IL education programme dedicated to doctoral students will be presented. It has been worked out basing on the analysis of existing literature and didactic programmes from Europe, Canada, and the US. All steps of the programme preparation will be discussed. All stages of IL training preparation will be described: from the planning, by preparing content, assessment, and evaluation till embedding the training into curriculum.

4.2 Staff

The IL programme recruits instructors not only from the reference department but from other departments of the library as well to cover many topics and to add expertise based on their professional functions in the library (Daugman, McCall, & McMahan, 2012).

Thus, the programme preparation should start from building an IL teaching team.

The teaching team should be responsible not only for teaching students but also for own learning of team's members, by developing regularly their pedagogical, technical, and information skills. This is the so-called "continuing professional development" that includes: responding to changing technologies (like new software, new equipment, new tools); pedagogical education (new techniques, new resources); and self-management (designing the course, time-managing, motivation, communications skills).

This new approach brings change in librarians' role. According to Kulthau's description (2004),the library staff take a new role and become knowledge facilitators.

Before introduction the IL education to students, the comprehensive training programme for teaching team should be provided. In the literature it is called "training for trainers".

After programme implementation, as suggested by Daugman et al. (2012), at least once a year the whole teaching team should meet to discuss teaching techniques and their effects, successes and failures, and to exchange new ideas.

The teaching team should have one or two coordinators who would be responsible for instruction design as well as for training the trainers initiatives. The coordinators should also take responsibility for promotion of IL education (see details in Section 4.9).

4.3 Preparation

The future teaching librarian should be up-do-date with current literature in education, LIS, and disciplines related to the courses she/ he will provide (Daugman et al., 2012). She/he should also be familiar with various IL standards and guidelines.

In the literature several examples of the so-called "syllabus study" can be found (see for ex.: East, 2005; Rambler, 1982; VanScoy & Oakleaf, 2008). Surveying the syllabuses provided by faculty might give the idea what competencies the students have to acquire and develop and what they

should learn in order to complete course assignments. Syllabi also help the teaching team to design IL education more appropriate to students' needs.

As Rambler (1982) underlines, syllabus studies do not only provide information useful for planning IL education, but they also can bring a reflection on "allocation of funds for collection development, in planning the optimum use of professional personnel, (...) and in creating a strong public service program among subject librarians" (p. 156).

The Rambler's paper was published in 1982, it means that thirty years ago this problem was already discussed in the USA. Perhaps, it is due to the fact that in the USA the programmes of studies at all levels were always formalised and provided syllabuses. In France and in Poland, at least in the current situation, the syllabus studies do not seem to be the most appropriate method of planning IL education for doctoral students. As, so far, the programmes of doctoral studies often do not provide detailed syllabuses.

Hence, it might be more useful and relevant to concentrate on general guidelines, for example – Dublin Descriptors (Bologna Working Group on Qualifications Framework, 2005). These are the qualifications defined at the European level, thus valid for all doctoral students in the European Union, where the principle of doctoral studies programmes are, according to Leaugue of European Research Universities (2007), transferable skills. These kinds of skills "add to doctoral students' employability and enhance the quality of their research project" (p. 9).

Dublin Descriptors are "the cycle descriptors for the framework for qualifications of the European Higher Education Area. They offer generic statements of typical expectations of achievements and abilities associated with awards that represent the end of each of a Bologna cycle" (Bologna Working Group on Qualifications Framework, 2005, p. 9). They were built on the following elements: knowledge and understanding; applying knowledge and understanding; making judgments; communication skills; learning skills.

For the purpose of designing an IL education for doctoral students, the qualifications that signify completion of the third cycle of studies should be

taken into consideration. The students who can be awarded by these qualifications are those who:

(1) have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field

(2) have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity

(3) have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication

(4) are capable of critical analysis, evaluation and synthesis of new and complex ideas

(5) can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise

(6) can be expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society (Bologna Working Group on Qualifications Framework, 2005, p. 68-69).

While planning IL education, librarians must consider how and what they can contribute to help students achieve the demanded qualifications. These concern undoubtedly IL application, i.e.: the mastery in information seeking, organising, evaluating and using.

4.4 Purpose of the course

> *Learning goals establish what the purpose of the course is and describe student learning outcomes. Through them we specify what students should know, what attitudes should be encouraged in them and what they should be able to do after the course (Torras & Saetre, 2009, p. 40).*

The purpose of the course must be defined very clearly. In literature the exemplary purposes of several IL courses can be found. The term “purpose” is often used synonymously with the term “learning goals”. The both terms will be applied here. Different learning goals presented in this section might serve as an inspiration during IL education planning.

Torras and Saetre (Torras & Saetre, 2009) discuss three types of learning goals: knowledge goals; attitude goals; and skills goals. In IL education the accent will be put on the skills goals. According to Andretta (as cited in Andretta & Cutting, 2003), learning goals emphasize the "know how" rather than the "know what". Thus, the skills goals approach seems to be the most appropriate.

For example, the major purpose of the course can be the aim to provide students with understanding of the sources and strategies essential to research in concrete domain. This contains: strategies for developing research projects, identification and evaluation of resources available in the disciplines and characteristics of scholarship and communication in a concrete domain (Daugman et al., 2012).

Reflection on the overall purpose of the course is also a good moment to think on the students' information and searching skills and competencies that the course intends to develop and/or deepen. The skills that students are expected to acquire can be included in the general purpose of IL education. (Repanovici & Landoy, 2007) suggest the set of skills related to use of Internet resources. These skills are as follows:

(1) easy access to Internet resources

(2) correct formulation of the search request in the search box

(3) use of Bollean operators for advanced research and use of restrictions and limits in the searching process

(4) definition and access of search engines and search tools

(5) access to scientific information resources

(6) assessment and accessing means of these resources

(7) dissemination and disseminating means of scientific researchers, storage means. John W. East (2005) proposes a syllabus of a IL course for the humanities. He describes general skills basing on the review of literature contributing to information behaviour of researchers in the humanities. These general skills of "information literate person" in this context are:

(1) understanding how information is disseminated in the discipline

(2) identifying appropriate bibliographic tools (print and electronic)
(3) searching databases effectively
(4) keeping current
(5) establishing a network of contacts
(6) consulting library staff
(7) organising references effectively.

For each of seven skills East establishes learning objectives that describe clearly what should researcher be able to do after IL course.

Ann Grafstein (2002) advocates for "mastery of generic information skills" that she perceives as essential for IL. She divides them into two types: searching skills and generic critical thinking skills

Searching skills mean the ability to understand the nature of information needs and formulate their adequate representations in purpose to locate information effectively in any area. Once the need has been properly formulated, "students must learn how to break down the topic from a discursive formulation into key-words, and then how to combine these terms with the proper use of Bollean logic" (p. 201) and how to use controlled vocabularies.

As for general critical skills, according to Grafstein, aspects of critical thinking do seem to apply generally across disciplines and all sources must be evaluated for appropriateness against certain criteria, like: timeliness, authority, bias, verifiability, and logical consistency.

Repanovici and Landoy's (2007) categorisation of skills essential for IL education in general is similar to others, already presented in this section, but the authors' intention was to concentrate mostly on electronic resources and cover:

(1) Skills of defining a problem or research topic
(2) Information sources skills

(3) Skills of Internet resources
(4) Internet search skills
(5) Skills of database and library search
(6) Skills of evaluating information and sources
(7) Referencing skills
(8) Skills of synthesising information
(9) Information presentation skills.

Carla Basili (2006) divides skills in different way. She presents three levels of IL competencies: (1) basic, (2) advanced, and (3) specialised. Basili's approach is the most general among the others described in this section and covers:

(1) Basic IL competencies:
- fundamental concepts: value of information, a general picture of the information universe
- basic theoretical level: information mapping, Information Retrieval basics,
minimum set of evaluation criteria

(2) Advanced IL competencies:
- basic IL competencies
- analysis of information sources
- the logic of the Information Retrieval process
- semantic representation of documents (basic concepts)
- scientific writing

(3) Specialised IL competencies:
- advanced IL competencies
- disciplinary information mapping
- specific search tools
- disciplinary writing.

Peter Godwin (2006), adjusting a well-known the SCONUL Seven Pillars of IL Model[58], proposes the following skills needed to master by the so-called Google Generation students:

(1) Recognising an information need

(2) Distinguishing sources and access

(3) Constructing search strategies

(4) Locating and accessing

(5) Comparing and evaluating

(6) Organising, applying and communicating

(7) Synthesising and adding new knowledge.

As mentioned earlier, the defined skills can be included into course's purpose. The competencies can be a purpose as well. What is a difference between skills and competencies? The competencies are more descriptive and consist of wider themes under which the narrower skills are described. For example in the following format:

(1) To define the objective of the research:

- to question the subject
- to define a project
- to define conditions of work

(2) To know the resources:

- types of documents
- centres of resources
- terminology of access

(3) To search for documents:

- to translate the project into key-words, in searching alogorithms
- to search for files, banks of data
- to precise the research theme

[58] Avaialble at: https://www.sconul.ac.uk/groups/information_literacy/publications/coremodel.pdf [Retrieved: 31 May 2013].

(4) To select the documents:

- to analyse paratexts
- to judge relevancy

(5) To use the documents:

- to search for information (reading)
- to collect data (taking notes, writing summaries)
- information treatment (analysis, finding connections between information)
- data treatment (references, reading notes, databases)

(6) To present information:

- to choose the most appropriate way of presenting and communicating the theme

(7) To evaluate:

- from the project perspective
- from the theme perspective (Tujague Candalot Dit Casaurang, 2004).

The competencies expected to be acquired during IL training can be also divided into four domains: (1) scientific, (2) informational, (3) communicative, and (4) technological. According to Martin (2005), these are as following:

(1) Scientific competencies:

- questioning
- discovering of the research domain
- familiarization with scientific data and different concepts of data arrangements
- capacity of synthesis

(2) Information competencies:

- familiarization with use of scientific resources
- awareness of information tools functioning
- databases arrangements (thesaurus indexation, full-text search)

- awareness of Internet functioning (capacity to distinguish between resources indexed by information professionals and the ones indexed automatically by search engines
- capacity to build search questions (choosing appropriate key words for browsed resources, using thesauri, etc.)
- identification of different types and elements of resources (author, article, monograph, etc.)

(3) Communicational competencies:

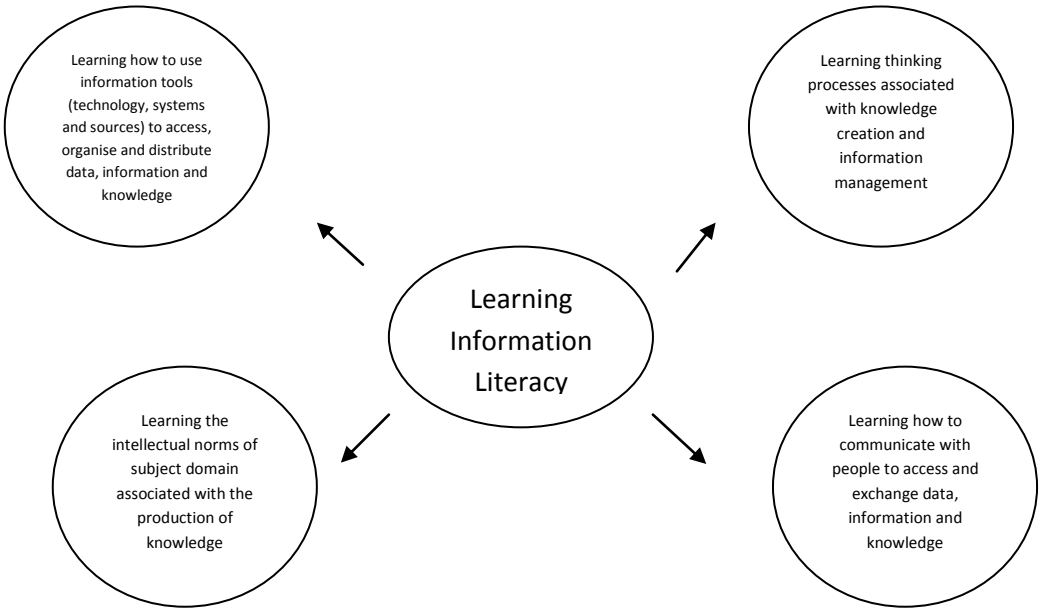
- capacity to present a written synthesis of the research project in an efficient way, using different types of documents (print or electronic)
- capacity to edit a document properly (syntax, orthography, appropriate vocabulary, norms, images captions, quotation respecting copyright, etc.)

(4) Technological competencies:

- use of computer, operating systems, server, Internet browser, word processing programmes, and virtual learning environment (a French term *environnement numérique de travail*).

The realisation of the competencies that are expected to be acquired during IL education is presented in a schematic and synthetic way on the Figure 12.

Figure 12. Key areas of learning. (Hepworth, 2000, p. 24).



There are five terms that can summarise all skills- and competencies-goals approaches presented above. These are: Key-Words, Search, Evaluation, References, and Presentation. Regardless of the theory and approach adopted, IL skills always close in these terms. But of course on every stage of education these terms have different meaning and a different content is hidden behind. In the case of doctoral students the advanced and specialised skills are taking into consideration, so the approach of Carla Basili, even though the most general, seems to be the most appropriate.

4.5 Learning outcomes

Once defining the purpose, the teaching team must answer the question "what should our students be able to understand and demonstrate by the end of the course?". These are learning outcomes that are expected to be met after completing the training programme. Learning outcomes should be defined for all course, but also for each unit (module/class). Defining learning

outcomes at every stage of training helps teaching team in evaluation and control if these outcomes are being met.

The examples of learning outcomes can be as following, suggested by Daugman et al. (2012):

- to be familiarized with print and electronic resources available through the library catalogue and their locations
- to know relevant databases and how to use them
- to access resources in other institutional and scholarly collections
- to know the role professional associations and organisations play in the certain domain and the offering of each
- to know ways of critical evaluation of resources
- to know how to locate scholarly web resources.

Heidi Julien (2000), who presented the findings of the national IL survey in Canadian academic libraries, numbered following abilities as learning outcomes:

- to know how to find information in various sources
- to know general search strategies
- to know how to locate materials in the library
- to know critically evaluate the quality and usefulness of information
- to know how databases in general are structured
- to be aware of technological innovations.

And Patrick Hall (2003), working on research skills of African-American students, emphasised the importance of, among others, the following learning outcomes:

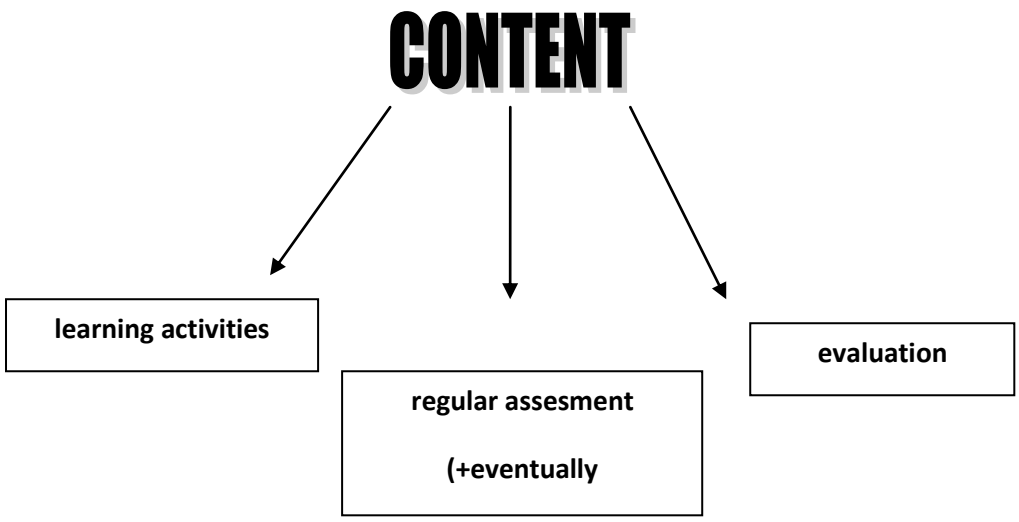
- to know to formulate a more focus research topic
- to discern the difference between general Internet sources (i.e. documents found via web search engines) and information located through proprietary or referred databases
- to know effective search strategies or techniques.

4.6 Content of the course

When the teaching team has defined the purpose of the course and drafted the learning outcomes, it is time to reflect on the course content. Daugman et al. (2012) suggest to create a course syllabus that contains all themes to be undertaken during a course. The idea of syllabus is mentioned also by Alexandre Serres (2006) for whom this is the way to create a foundation of IL education programme on which all trainers at every stage of education might base. He uses the term "corpus". Such corpus in his opinion, would assure a cohesion of the programme, a common language and could help in eliminating reduplications.

What are the core elements of course content? They are presented in a schematic way on the Figure 13 and they will be discussed in details in Sections 4.7, 4.8, and 4.9.

Figure 13. The course content.



4.7 Evaluation and assessment

In this section the need of assessment and evaluation will be discussed.

4.7.1 Evaluation

In the context of IL education, the term "evaluation" refers to assessment of the effectiveness of teaching. For teaching librarians evaluation serves as a tool of identification success and failures and the basis of improving the education programme. For course evaluation purpose questionnaires, group discussions, focus groups, or comment boards can be used. The peer-review of learning and teaching is also suggested by some authors (Gaunt, Morgan, Somers, Soper, & Swain, 2009).

Chevillotte (2005) pays attention on the importance of students' evaluation. Institutions must find the way (and the financial sources, too) to check the effectiveness and impact of trainings. Only the evaluation will let to improve the courses and update them regularly to current needs. She writes that in Australia, Canada, or in the USA this kind of research is conducted at regular intervals, there are even special programmes helping in evaluation. She notices that in France the work in this domain is still not sufficient.

Also Campbell (2004) advocates for including evaluation into IL programmes. She writes:

> Because of the substantial changes happening in the availability and delivery of information and the variety of environments in which users require information, everyone delivering information literacy instruction must evaluate their programs rigorously. Not only must we meet the users' changing needs, we must also be able to demonstrate in a concrete way that information literacy programs are good value for the resources invested. The definition of any information literacy program must now include some evaluative component that will reveal the extent to which the program was successful (p. 6).

The most common strategies consist of quantitative assessment techniques involving pre- and post-tests, questionnaires and survey (Andretta, 2005, p. 63). Also Macklin and Fosmire advocate for two kinds of evaluation: pre-

self-evaluation, before starting IL training and the post-assessment at the end of learning programme (Macklin & Fosmire, 2004).

The authors of "Handbook for Information Literacy Teaching" (Gaunt et al., 2009) propose three tools of evaluation that can be useful in didactic process. The first one is reflective practice. It aims at developing a self-awareness about the nature and impact of librarians' teaching. Reflective practice is an element of continuing professional development and is a way to improve and enhance one's teaching. It gives a critical assessment, analysis, and review of all aspects of teaching. The exemplary questions for reflective practice can be as follows:

(1) What was the purpose of the session?

(2) Did I have any concerns about the session beforehand?

(3) Which parts of the session went well and why?

(4) Which parts of the session did not go well and why?

(5) Were the learning outcomes achieved?

(6) What have I learned that can help me improve my performance?

Torras and Saetre (2009) also raise the self-reflection idea. However, they name it "research of teaching". According to them, a teaching librarians must become a "researcher" in his/her class, what means the necessity of being able to systematically criticise her/his own teaching, to examine his/her own teaching, to apply theory to the teaching practice, and to allow other teaching librarians to observe and discuss his/her teaching. The last issue corresponds with the Peer Review of Learning and Teaching discussed later in this sub-section.

The second tool of evaluation, suggested by Gaunt et al. (2009), is a feedback from students. It can be get directly or indirectly, anonymously or not. By group discussions, questionnaires, or comment boards (for ex. post-it notes left on the board). In their book, Torras and Saetre (2009) give an example of a 10 question evaluation form that surveys (mostly using 5-point Lickert scale) students' expectations before and opinions after the course. The most important questions seem to be: "Has the course lived up to your

expectations?" and "How could the course have been improved?". The questions related to the course relevancy and clearness of material presentation are also of a big importance. Ten well-constructed questions (including six closed ones) should be enough for teachers to achieve their evaluation goals and for students to answer comprehensively and with required attention. Daugman et al. (2012) suggest to build up a query addressed to students on the following themes:

- Topics or sessions found to be most valuable and least valuable
- Perceived problems of the course
- Effectiveness of technology used in the course
- Opinion, expressed in a Lickert scale, on the instructors' competence, preparedness, enthusiasm, and encouragement of critical thinking.

The third tool, advocated by Gaunt et al. (2009), is Peer Review of Learning and Teaching (PRLT). This is a method well-known first of all in Anglo-Saxon countries, designed to help in reflection on teaching with colleagues' support. One colleague observes other's teaching session and afterwards helps reflect on all aspects of teaching process. PRLT aims: to provide inspiration, to encourage substantial critics about one's teaching, and to see alternative teaching methods and styles (potentially suggested by a peer). As this is a peer method, a teacher once observed, another time attends his/her colleague's teaching session as a observer.

In 2008 Ralph Catts and Jesus Lau published *Towards Information Literacy Indicators* under the aegis of UNESCO (Catts & Lau, 2008). They proposed a basic conceptual framework for measuring IL which could serve as a reference to facilitate the elaboration of IL indicators. They suggest to use the indicators already existing and used by the UNESCO Institute for Statistics (UIS) in Literacy Assessment and Monitoring Programme (LAMP) survey as well as these used in The Programme for International Student Assessment (PISA), collecting evidence of the attainment of school students in Mathematics, Reading and Scientific competences at various age levels. In authors' opinion, the indicators derived from the existing surveys will reduce

the costs and will be more effective. Catts and Lau presented a very interesting theory about the sufficient level of IL:

> There is no one criterion that will describe the level of information literacy required of people in any of the domains of application included in the Alexandria Proclamation. Furthermore what constitutes a satisfactory level for any particular context will change over time. This is the nature of any human capacity. At any time, a new situation may require a new level of information literacy capacity. Hence there is no point in defining a minimum level of information literacy. That is why a measurement model is proposed that identifies items, and hence people, along a continuum of information literacy capacity (p. 29).

They underline that each person/nation/society has different information needs. Thus, it is impossible to unify the IL programmes. Each case must be considered individually.

Patricia Montiel-Overall (2005) also advocating for teachers-librarians collaboration, writes about the importance of (as she names that) "co-evaluation". The reflection on what was successfully taught and how to improve the process in the future is needed after completed an educational experience.

4.7.2 Assessment

Assessment helps estimate students' progress. It shows if the learning has been effective and if the intended learning outcomes have been met (Gaunt et al., 2009; Skagen et al., 2008). For students' assessment in-class tests, review of recent literature on a topic, reports, or essays are recommended.

The authors of "Handbook for Information Literacy Teaching" (Gaunt et al., 2009) pay attention to assessing related issues. They distinguish three types of assessment: (1) diagnostic – to identify any potential gaps in students' knowledge; (2) formative – to help students learn more effectively, and (3) summative – to indicate the extend of learners' success in meeting the learning outcomes.

The example of diagnostic assessment can be a pre-assessment discussed by Macklin and Fosmire (2004). The authors underline the importance of self-assessment and recommend to hold a pre-assessment test at the beginning of the course and post-assessment at the end of IL education programme. Such tests aim to rank the students' IL skills level according to their confidence. For pre-assessment Macklin and Fosmire suggest building a quite simple form consisted of few statements that students have to rate (here, the tools like the Lickert scale can be useful). The form provides a self-assessment of two types of skills: (1) research and technology skills and (2) IL skills. The statements formulated for self-assessment of the first type of skills are as following:

- I rate myself as a researcher
- I rate myself using information technology
- I rate my problem-solving skills
- I rate my ability to work in a group

And for the second type:

- I rate my understanding of the value of information
- I rate my ability to evaluate information effectively
- I rate my ability to construct quality search strategies
- I rate myself as information literate.

In pre-assessment students often declare that they already know everything. As Macklin and Fosmire write, "because of students' existing beliefs that they are already information literate, it is necessary to begin the integration of information skill building where they can use the tools they know" (p. 49). As for post-evaluation, the self-assessment of (1) attitudes towards the importance of IL content and (2) IL skills is suggested. Similarly to pre-assessment, Macklin and Fosmire propose the students few points to consider. In the case (1) their attitudes (very important/somewhat important/somewhat unimportant/very unimportant/don't know) on the following statement are measured:

- Formulate a research question

- Describe a topic
- Use a variety of resources
- Find needed information
- Evaluate sources
- Cite information.

In the self-assessment (2) students are asked to evaluate their self-assurance (confident/average/don't know) of the same statements.
Generally, according to the authors, in the post-assessment students rate themselves more closely to their actual achievements, as many of them gain new insights in problem solving and information retrieval during the course.
Simiraly, Skagen et al. (2008) distinguish two types of assessment: (1) product assessment and (2) process assessment. The first one, held at the end of the course, assesses completing the learning goals. The second one gives feedback about the students' progress, so should be held during the course to support the learning process and help achieving the learning goals.
Megan Oakleaf (2009) arguments that assessment plans help "demonstrate the full impact of librarians on students in higher education" (p.80). Well-organised assessment, realised on different levels adds value to the teaching mission of the library. Oakleaf is of the opinion that if the target group is large, it is better to assess even a small population sample than to entirely leave this stage of education. She advocates for a deep reflection, a realistic plan and alignment assessment with goals of each department of the university. Proposing that, she suggests that assessment should be a component of institution's strategy and links with its mission, vision and general learning outcomes. This statement shows also how embedding IL into curriculum is important for a coherent teaching and learning at the whole university.

Besides, as Ane Landoy (2010) recalls, there was a pedagogical research that had found assessed subject perceived by students with more importance and emphasis. That is also an argument in discussion on assessment. Its lack may result in students' incomprehension of the importance of IL skills and avoiding IL courses.

Whatever type of assessment the teaching librarian chooses, the most crucial is not to use always the same method. Assessment should be adjusted to students. At this point, collaboration between library and faculty is also recommended as it can lead to a dual decision on the best assessment methods and the most pertinent topics that should be a subject of evaluation.

To conclude discussion on assessment and evaluation, the example of inaccurate attempt to assess and evaluate at the same time will be recalled. Christel Tujague Candalot dit Casaurang (2005) tried to joint assessment and evaluation and elaborated two questionnaires that she named (1) initial and (2) final one. The initial questionnaire consisted of 37 questions, and the final one – of 21. Some of the questions were closed-ended but the majority was multiple choice or opened-ended, requiring more than one-sentence answer. The author intended to assess students' progress and to evaluate all teaching process only two times during all IL education. By joining constructing the initial questionnaire in the way that, among others, students were required to give their own definitions of issues like: library catalogue, bibliographic and full text databases, or Internet, the author discouraged respondents from the very beginning. In fact this kind of questionnaire does not check skills but knowledge and it is against the constructivist and process-oriented approaches to learning. The assessment part of the final questionnaire was constructed in a better way and the majority of questions were closed-ended, however their number was still too large because of the idea of joining assessment (i.e. students' progress) with evaluation (i.e. teaching process) what had been the wrong assumption from the beginning.

Assessment and evaluation are one of the most important components of education process. Unfortunately, they are ignored quite often. This is a big mistake as the education programme cannot exist in separation from learners' needs and expectations as well as from the control of the teaching effects. The lack of assessment and evaluation makes the course "art for art sake" without any pedagogical function. Both assessment and evaluation should be taken into consideration in the planning of a course and should be integrated in the learning process (Torras & Saetre, 2009).

However, while preparing evaluation and assessment, librarians should be aware that it is not possible to ask all questions and that it is useless to construct a long query as it risks to not be filled in entirely or to be filled in hastily without enough attention. The evaluation and assessment should cover the most important issues and concentrate rather on students' skills developed during the course than on the quantity issues needed for library's statistics.

4.8 Learning activities

According to the European Commission's definition, learning activities are "any activities of an individual organised with the intention to improve his/her knowledge, skills and competence" (European Commission, 2006, p. 9).

In the educational context, learning activities are related to the pedagogical concept of "active learning" and refer to methods and techniques used during the course, like: work in pairs, work in groups, quizzes, teacher's presentations, group questioning, group discussion, etc. Also the advent of Web 2.0 and all social network issues can be used in order to enrich learning activities. As Bubel (2012) writes, the social media encourage users to active participation in creating the content. In the case of IL training, this might be an educational content. Web 2.0 provoked the change in education as well. And the use of new technologies in teaching is a popular theme of pedagogical research nowadays. What has been so far named "learning exercises", now is named rather "learning technologies" and the Web 2.0 tools like: podcasts, QR codes, social bookmarking, Twitter, Facebook, or

Google+ profiles, vodcasts, web conferencing, or wikis are often used in modern education. The use of new media and technologies help achieve the relevancy of learning activities. According to Torras and Saetre (2009), learning activities should be relevant to students' own experience . This makes learning activities more meaningful and useful for students. Learning activities should also correspond with "the content, learning goals, didactic conditions, and assessment of a giving teaching situation (...), [they] should ideally cover all the learning goals of a course" (Torras & Saetre, 2009, p. 50).

4.9 Promotion of IL education

For years promotion has been perceived as a purely marketing term, far from librarianship or academic environment. However, nowadays libraries, universities, and other cultural and educational non-profit institutions understood that there is not a big difference between a commercial enterprise and public institution, and both, even if the basis of their functioning differs, should undertake the promotional initiatives to be visible and recognised by their customers.

In 1997 within IFLA, a Management and Marketing section was established. Every year this section organises a worldwide competition and awards the best marketing projects or campaigns in libraries. In Poland, the Young Librarians' Forum in 2012 under the theme "Library as a brand" (Pl. *Biblioteka jako marka*), was entirely dedicated to the marketing and promotion in libraries issues.

The above examples, as well as many other initiatives aimed at promotion of libraries and their services, prove the importance of the subject.

As noted earlier (Chapter 1, section 1.5.2), since 2008 IL has its official international logo and IFLA IL Section published a marketing manual to help in its promotion. Thus, the first marketing step, i.e. the visualisation of the concept has been already done.

Then, as suggested by Kurbanoğlu (2008), two kinds of promotion should be planned and implemented: promotion to faculty members and promotion to students.

As for promoting to faculty members, the schema is quite similar to the collaboration one (described in details in Chapter 3, section 3.3). But in this case, the accent is put on the promotion of IL, so it is crucial to show all advantages of IL and underline how IL can help in lectures, for example by presenting a new database and its features, offering a session on referencing or/and plagiarism, highlighting how IL is present in many aspects of academic life.

Promotion to students requires first of all the attractive form and use of new technologies. Even if the IL course is embedded into curriculum, what in fact makes it compulsory, students should be convinced of IL importance, so all kinds of advertisement using Web 2.0 tools (like noted earlier Facebook, Twitter, Google+, etc.) can be efficient. Also, the traditional, printed, promotional flyers can be useful. And it is good to use the first training session for presenting students what practical future benefits IL education will bring.

4.10 Examples of already existing IL courses for doctoral students

One of the best practice [59] methods is to look at already existing library instructions to get the idea of the concept, to get inspired, to follow, and to decide what format to choose for one's own course (Benjes-Small et al., 2009). In this section a few examples of IL education programmes from three European countries (France, Norway, the United Kingdom) will be presented.

4.10.1 France – FORMIST guidelines

In 2007 FORMIST published a document titled "Information literacy for advanced students (master and doctoral). Educational elements" (Fr. *Maîtrise de l'information des étudiants avancés (master et doctorat). Eléments pour une formation*) (FORMIST, 2007). This publication is a result of the 6th FORMIST Meeting (this regular professional event as well as FORMIST itself

[59] „Best practice" is a marketing term, referring to a method or technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark: www.businessdictionary.com [Retrieved: 31 May 2013].

were described in details in Chapter 1 Section 1.4.1) and its purpose is to help librarians identify different aspects of training the advanced students and prepare library's own training programmes. These guidelines underline also the need of familiarising doctoral students with publishing process.

The document is organised around the following five themes:

1. Information culture
2. Knowledge of scientific information
3. Information searching
4. Information analysis and exploitation
5. Production and mastering of information.

The document is structured as follows:

- Each theme has objectives defined
- Each objective has its notions and the content is detailed
- Each content is attributed to one of three categories:
  - know-how (information competencies)
  - notions and theoretical knowledge (definitions, problematic aspects, characteristics)
  - critical questioning (reflection aimed at encouraging critical thinking on pernicious effects of information).

It seems that authors of these guidelines (twenty-four professionals) wanted to cover all potential topics. As a result, they proposed in total forty-six objectives attributed to five themes noted earlier. The biggest number of objectives, eighteen, represent the theme "knowledge of scientific information". It can be observed that the majority of objectives (thirty-four) are related to the category "notions and theoretical knowledge", while twenty-three to "know-how", and fifteen to "critical questioning" (the total number of objectives exceeds the number of categories as there might be one than more objective attributed to one category). This focus on theoretical aspects of information gives an impression that IL is treated as the next course subject and not as an accompanying training that aims at acquiring

information skills and helping in research work. However, this document is a set of guidelines, so the creators of IL educational programmes can take inspiration but they are not obliged to completely follow this framework.

4.10.2 France – Form@doct

Form@doct (*Formation à distance en information documentation pour les doctorants*)[60] is a web platform for self-training launched in 2010 at the European University of Britanny (Fr. *Université européenne de Bretagne*), in Rennes. It works on the base of LibGuides [61] - an American system for creating research guides and sharing knowledge. The content of Form@doct is available on Creative Commons (CC) license. Form@doct was inspired by five thematic axes proposed by FORMIST (see above, Section 4.10.1). The principles of Form@doct have been introduced also to international audience thanks to presentation given during the 78th IFLA Congress and then publication in IFLA Journal (Malingre et al., 2013).

The platform offers self-guides organised according to four subjects (website tags) related to scientific information: Research, Exploit, Product/Publish, Know. Under each tag, there are from two to six sub-themes, under which more detailed questions and answers (in the form of short articles) are provided. This is a pattern well-known from the so-called "FAQs – Frequently Asked Questions", used in the majority of websites. The short articles are illustrated with slides, videos, or links to external resources. There are twenty-two librarians from Brittany currently involved in this project and they are the authors of the "guides" as they call these short articles.

Form@doct provides also a multi-search window allowing browsing within whole database.

The authors of Form@doct wanted to prepare a guide where each doctoral student will find needed information, no matter which field of study she/he represents. They kept in mind the different information practices. Because, as they wrote, "a historian and a lawyer do not search and use information in

[60] Available at: http://guides-formadoct.ueb.eu [Retrieved: 31 May 2013].
[61] Available at: www.libguides.com [Retrieved: 31 May 2013].

the same way even though both of them use Google or Google Scholar" (Malingre & Serres, 2011, p. 61). The purpose of Form@doct is to:

- Answer on the needs of doctoral students in the domain of scientific information
- Accompany doctoral students on different stages of their work by helping them in:
  - better understanding and effective use of Web tools useful for researchers
  - mastering the new forms of producing and publishing scientific information.

Form@doct is a modern platform, well-thought and well-established (also, thanks to application of good software, tested earlier by many US libraries). However, it must be underlined that it does not provide the features and advantages of face-to-face training. Thus, it can be treated only as a complimentary (mostly theoretical and not exhaustive) IL tool rather for doctoral students already familiarised with the topics proposed by Form@doct, who want just to deepen the subject, than for beginners who need a complete information.

4.10.3 France – University of Lille 3

The University of Lille 3 Library offers a 16-hour IL training for doctoral students, divided into six chapters. The training is not compulsory for all doctoral students; however it is one of the activities that can be completed within the Module A2 of doctoral studies curriculum, awarded by 7 ECTS credits[62]. In this case the participation in all sessions is compulsory. The students who choose other activities among those suggested in Module A2, still can participate in IL training, but they do not have to follow all sessions.

[62] The details on doctoral studies schedule and ECTS credits are provided in Appendix 11.

The themes of chapters are as follows:

1. Research strategies
2. Management of bibliography
3. Structure of electronic document and the track of thesis
4. Author's rights and obligations
5. Stakes of scientific publishing
6. Increasing the chance of getting published.

For the first chapter three sessions, 2-hour each is previewed; for the other chapters – one 2-hour session each. There are five teaching librarians who provide this face-to-face group training in the library building[63].

University of Lille 3 Library offers also an online training on Moodle platform, divided into five sections that are thematically similar to those, offered for the sessions in the library building.

The IL educational offer elaborated by this library is well structured and well organised. However, as resulted in the study conducted among doctoral students (see Chapter 2) and described widely in findings and recommendations of this study, the major problem is the lack of library offer promotion among the students. For example, in the academic year 2012/2013 the Doctoral School of Lille 3 acquired 128 new students, and only 7,80% of them[64] took part in the 2012/2013 IL training. The number of participants in an online course was even smaller.

[63] The details of this IL education programme are provided in Appendix 12.
[64] Numbers resulted from this thesis author's observation.

4.10.4 Norway / Denmark – Project "Information management for knowledge creation"

As it can be read on the project website[65], "the aim of the project is to develop IL modules for PhD students". This is a long-term initiative, held by six institutions: Bergen University College Library, Norwegian Archive, Library and Museum Authority, Norwegian School of Economics Library, University of Bergen Library, University of Oslo Library, and Aalborg University Library. The project plan is divided into four phases: Mapping the territory, Designing instructional modules, Implementing and evaluating, Communicating the results. So far, the report from the first phase was published (in March 2012 in Norwegian and in January 2013 in English), titled "PhD candidates and the researcher process: the library's contribution"[66]. In May 2013 in Oslo a seminar for Norwegian librarians dedicated to a new website "PhD on Track – a starter kit for PhD students" will be held[67]. This website will be the realisation of the second phase of the project.

The "PhD on Track" aims principally at familiarisation doctoral students with advanced information searching, publication ethics, copyright/intellectual property, and publishing the research results.

The third phase of the project will aim at integrating the IL programmes into doctoral studies curricula and embedding into doctoral studies curricula and providing their evaluation. And the fourth (the last) phase will result in publishing the proceedings of the conference held within the project, as well as other publications; in undertaking the training for librarians (the so-called and noted earlier "training for trainers"); and in publishing a final project report.

[65] Available at: http://inma.b.uib.no [Retrieved: 31 May 2013].
[66] Available at the website noted above.
[67] This section is being written in March 2013, that is why the future tense is applied.

Thanks to English translation of each phase results, the Norwegian-Danish project is already known internationally and undoubtedly will be an inspiration for librarians in other countries, as many other, the so-called "Nordic" IL initiatives.

4.10.5 Norway – University of Bergen Library

University of Bergen Library offers a training in scientific publishing and information use. This IL education dedicated to doctoral students started in 2009. This is the optional course (however strongly recommended by department) for doctoral students in Mathematics and Natural Sciences. It consists of lectures (called here "plenary sessions") and workshops. There are three lectures (approx. duration 1,5h each) and eight workshops (from 45 minutes to 1,5 h each). Below themes, time and content of each module is presented.

4.10.5.1. Lectures

Part 1: Scholarly literature	1h 45 min.	Structural characteristics of scholarly literature; Searching and retrieving scholarly literature; Choosing 'high quality' scholarly literature; Using scholarly literature in own works; Follow the development in a subject field;
Part 2: Citation statistics	1h 5 min.	The journals' impact factor, mean citation count and h-index; Examples from ISI WoS and Google Scholar Publication points according to the Norwegian system.
Part 3: Publishing	1 h 20 min.	Copyright issues and publishing Open Access publishing; Self-archiving and institutional repositories

4.10.5.2 Workshops

PubMed	45 min.	Database features and hands-on searching
CSA	45 min.	Database features and hands-on searching (ASFA, Georef, Entomology Abstracts, MGA)
ISI WoS and Google Scholar	1h 45 min.	Database features and hands-on searching (JCR, ISI WoS, Inspec, Zoological Records, Biosis Previews and Google Scholar)
Scifinder	1h 45 min.	Database features and hands-on searching
CABI	45 min.	Database features and hands-on searching
MathSciNet and ACM Digital Library	1h 45 min.	Database features and hands-on searching
EndNote Basic	1h 45 min.	Managing references (beginners); Entering references; Choosing styles; Creating bibliographies; Using references while writing (MS Word).
EndNote Advanced	1h 45 min.	Managing references (advanced users); Short repetition of main features; Adding full text to a reference; Creating a bibliography from multiple documents; Collaborating on an EN library; Creating own styles.

In the case of this course, it is very clear that the main accent is put on publishing. The doctoral students are perceived as future authors of scientific works (mostly articles). This is the core of IL education around which all other issues, related to searching in databases and managing bibliography are gathered.

4.10.6 Poland – IL courses scenarios

"Information literacy. Scenarios of courses for students" (Pl. "Edukacja informacyjna. Scenariusze zajęć dla studentów") (Rozkosz & Wiorogórska, n.d.) is a result of the work of academic librarians who took part in the Training the Trainers in Information Literacy workshop (this event was noted earlier, in Chapter 1 section 4.2). The main goal of this workshop was to prepare academic libraries for developing an attractive IL educational offer and one of the tasks was a group work on scenarios. In the result, six scenarios draft were elaborated. The purpose of the scenarios was to suggest the IL education supporting students at different stages of their studies. The book will be published online, on CC license, so all content might be freely used. The scenarios' themes are as follows:

1. An initial course for the 1st year bachelor students
2. Course on ethical use of information and citation styles for the 3rd year bachelor students, preparing their thesis
3. Information searching course for the 3rd year bachelor students, preparing their thesis
4. Information searching course for the 2nd year master students, preparing their thesis
5. Copyright and citation course for master and/or doctoral students
6. E-learning course for doctoral students: information searching and publishing of own research work.

In each scenario, the following issues are taken into consideration:

- course duration (it might be a one-session or a multi-session training)
- trainer (librarian alone or with help of faculty; if librarian – a reference or a subject one)

- participants (the number of participants and their domain of study; the year of study is already defined in the course's theme)
- what should teaching librarian do before the training (for example: contact the lecturer to obtain the course reading list, to consult the students' information needs, and to familiarize with syllabus to eliminate from the IL education the topics already discussed)
- the assumed prior level of students' information competencies (to start planning a course, it is indispensable for teaching librarian to assume what skills students might already have, for example whether they have already participated in the library instruction, what catalogues and databases they know, etc.)
- materials needed to conduct a training (for example: well equipped computer room, with word processor and reference management software installed, Internet connection, a slide projector; but also: library leaflets and brochures, online handbooks, the directory of useful websites)
- learning goals (this problem was described in details in section 4.4)
- information content of the training (for example: catalogues, databases, information tools, repositories, online archives, digital libraries, etc.)
- course phases, activities and applied techniques (in this part, every stage of each session is described in details, taking into account all elements described in section 4.6).

4.10.7 The United Kingdom (Wales) – The Cardiff Handbook for Information Literacy Teaching (HILT)

HILT [68] first edition was published in 2005 on CC license. Since then it has been updated several times (the last update was made in 2011). As it is written on the HILT website, "this Handbook was written by a group of subject librarians at Cardiff University to support their colleagues in Information Services as they developed their information literacy teaching". A 178-page e-book is currently the best known European manual for academic IL librarians. The HILT is divided into eight sections:

1. Information Literacy Key Issues
2. Library Orientation
3. Lesson Planning
4. Lesson Formats
5. Teaching Technologies
6. Lesson Delivery
7. Assessment
8. Evaluating Your Teaching.

Moreover, four appendices are provided. These are: Supporting documents, Examples, Further reading, and Index. Thanks to the decision of publishing HILT on CC license, the handbook can be freely used or translated. And in 2008 it was translated into Finnish.

HILT is not the first initiative of librarians from Cardiff. In 1996 they published "Information Skills Teaching Manual". The manual contained guidelines and examples of good practices (Clinch & Jones-Evans, 2007). In the case of both handbooks described here, the most important was the fact that both were internally and externally evaluated. It means that their relevancy and usefulness were revised.

[68] Available at: cardiff.ac.uk/insrv/educationandtraining/infolit/hilt/index.html [Retrieved: 31 May 2013].

HILT is not the only IL resource provided by the Cardiff University. It is just one of the elements that together create an exhaustive IL support for librarians. According to Clinch and Jones-Evans (2007), the other elements are:

- the Training the Trainers course, sharing good practice training sessions
- the development of a teaching Materials Repository, where subject librarians can deposit their materials and borrow and adapt those created by their colleagues for their own purposes
- the Cardiff University Information Literacy Resource Bank [69] of high quality learning objects.

As mentioned, the resources offered by the Cardiff University are available online. Apart from that, every year in February, librarians from Cardiff organise Erasmus Staff Development Programme – a one-week, free of charge training for foreign professionals from the UE, focused in IL education issues.

4.11 Draft of the course for doctoral students: "My first publication"

Taking into consideration all issues discussed in this chapter and basing on all elements presented, i.e. staff, learning goals and outcomes, evaluation and assessment, content of the course, learning activities; as well as pedagogical considerations described in Chapter 3 and on the results of the comparative study presented in Chapter 2, the framework of an IL educational programme for doctoral students will be suggested in this section.

4. 11.1 Main idea of the IL instruction

IL in practice can be perceived as a process of acquiring information skills from the basic library skills to the full expertise in information acquiring, evaluation, and use.

[69] Available at: https://ilrb.cf.ac.uk [Retrieved: 31 May 2013].

The target group of this course is doctoral students who indisputably should have ambition to become information experts.

This IL educational programme is considered as a supplementary course to traditional one-time bibliographic instruction. The main stress of the suggested training will be put on the publication process, so the whole educational programme will be subordinated to these issues. Not only tools and technology will be introduced, but also the elements of the research process.

Thus, first of all the scientific journals will be presented and discussed as playing the central role in research (as suggested by Lefebvre, 2011). Doctoral students are perceived as students, but also as researchers, so the different perspectives of presenting the topic should be applied. This goes along with the Leaugue of European Research Universities' s vision (2007) of doctoral training, where the introduction into the scientific community is understood as, among others, encouraging doctoral students to write papers for submission to peer-review journals.

It should be assumed that the training will focus only on information and exercises that have a real significance to doctoral students.

The education "in the spiral" will be also taken into consideration as the one that allows to gradually develop the level and to focus on independent learning.

4. 11.2 Duration

The course consists of four sessions, 1,5 hour/each one. It is recommended to provide this training during the Fall term, at the beginning of academic year.

4. 11.3 Participants

The course is addressed to the 1st year doctoral students, being at the beginning of their research. Potentially, the student on higher years as well as master students who prepare their dissertation can participate, too. The course might take place in the library building or at the department – the only requirement is a computer room with a slide projector and computers

equipped with word processor and reference management software installed, and Internet connection. The wi-fi connection is needed as well because during the last two sessions students will work on their own computers.
This course is designed in the way that it can gather students representing one field of study or different ones, as it bases first of all on individual work. The only requirement is the number of participants – maximum 15 persons – to allow the best cooperation between trainer and students.

4. 11.4 Learning goals of the course

As Green and Macauley stated, "The doctorate is self-regulated and self-constructed" (Green & Macauley, 2007, p. 323). The purpose of this course is to form a habit that can be named "the personalized management of research information", aimed at creating a mechanism for developing a comprehensive literature review of high value (use of good sources, constructing a correct list of references). The review of existing literature is one of the most important stages of research work.
The initial assumption is that participants have already taken part in the library instruction, but it was long time ago (the most probably on the 1st year of their bachelor studies).

4.11.5 Information content of the course

Contents of the course consist of following topics:
1. Catalogues: library OPAC, national catalogue, WorldCat®
2. Electronic resources – databases subscribed by the library, DOAJ, OAISTER. Also tools for searching e-resources, like AtoZ list or multisearcher
3. Google Scholar – useful as the first searching gate, allowing for fast but superficial familiarization with the topic
4. Print journals (national and international) representing student's field of study
5. Repositories and digital libraries – institutional, national and foreign (like TEL or Europeana)

6. Databases of research theses – DART Europe, ProQuest Dissertations and Theses, NDLDT (Networked Digital Library of Dissertations and Theses)

7. Bibliometrics - Impact Factor (ISI Web of Knowledge), Scopus, H-index, Publish or Perish

8. Reference management software – one to choose among: Zotero, Mendeley, RefWorks, EndNote.

4. 11.6 Learning activities undertaken during the course

4.11.6.1 Session 1 – 1,5 hour – Theses repositories

At the very beginning of the course the trainer explains to students what is the course's goal. Then, she/he moves on to the content of the first session.

1. Definition of research topic and key-words in national language, in English, and in any other language useful for the research. A short presentation given by the trainer to explain why the key-words are important while searching the literature. Then, students' individual work aimed at reflection and defining the relevant key-words.
2. Effective search strategies – truncation, Boolean operators, combining terms to refine a search. A short presentation given by the trainer, followed by distribution of leaflets.

Exercise (during the session, to continue afterwards) – Find out whether the doctoral theses similar to your subject exist already in the country and/or abroad. Use the defined key-words and combined terms and search in databases of research theses. When you find some relevant reference, save it at once on your computer. Have your list with you also for the next session.

4.11.6.2 Session 2 – 1,5 hour – Scientific journals

1. Checking "homework". The trainer asks students how many references they found in the theses repositories during and after first session. Are they in national or foreign language? Did they give students some ideas and inspiration for further work?
2. The most common and valuable journals from my field of study. Print and electronic. National and foreign. The trainer asks students whether they can give the example of three-four journals. If the course takes

place in the library building, the group can go to the periodicals reading room and search together for the print journals. The electronic journals can be searched using AtoZ list. How to find the journals if we do not know the exact title? A short presentation (by the trainer): subject heading useful for searching print journals in library catalogues and the multisearcher or discovery tool – useful to search e-resources.

Exercise (during the session, to continue afterwards) – Find four journals of your domain (two in national and two in foreign languages). Observe the structure of the papers published there; try to take notes on the most important elements of the paper. Look how the references are organised – are there footnotes or endnotes? Or maybe there is only a name of the author(s) and the year of publication given in the brackets? Look at the guidelines for authors in each journal – what are the requirements?

It is recommended to bring the own computers for the next session.

4.11.6.3 Session 3 – 1,5 hour – References management

1. Checking "homework". The trainer asks students what they have learnt about the paper's structure and organizing references in the journal of their field of study. Could they distinguish the most important parts of the paper (like for example: abstract/summary, key-words, introduction, literature review, research methods, research process, results of the study, conclusions, and references). How were the references organised in these papers? Have they found the names of reference styles, like: APA Style, MLA Style, Chicago Style, etc.?
2. Reference management software (RMS). A short presentation given by the trainer on the principles of RMS. If the library purchased a RMS (like EndNote or RefWorks), it should be presented; however, it should be underlined that this RMS can be used only by students and employees of the university. Once someone leaves the university, she/he looses his account, so it is recommended to export the data to other RMS before. The other solution is to use from the beginning a free RMS (like Zotero or Mendeley). All depends on user's preferences

and research work requirements – as, for example, not every RMS provides the footnotes option.

Exercise (during the session, to continue afterwards) – choose one RMS, install it on your computer and create your personal account. Install Web importer in your Internet browser and plug-in for word processor. Try to download to RMS the references of the part of your searching results from the session 1 and 2. Apart form the bibliographic record, download the files as well.

4.11.6.4 Session 4 – 1,5 hour – Gathering materials for literature review

1. Checking "homework". The trainer asks students what difficulties they had during the work with RMS and whether they have some doubts or questions related to this issue.
2. Developing the literature searching. Building the search strategies. Familiarising with resources. The trainer gives a short presentation on catalogues (local, national, and international). She/he presents the searching options and explains the principles of inter-library loans. She/he shows also how to save a bibliographic description in RMS directly from the catalog page. Then, the trainer presents electronic resources, repositories, and digital libraries: those available at the library and those in Open Access.

Exercise (during the session, to continue afterwards) – using the truncation, Boolean operators, combining terms, and the key-words defined during session 1, browse all the resources. Save the relevant results (together with files, if possible) in your RMS.

4.11.6.5 Session 5 – 1,5 hour – Citation, Bibliometrics, and Archiving

1. Checking "homework". The trainer asks students whether they had any problems with browsing the resources and saving them in RMS; if yes – what problems with which resources. She/he gives additional guidelines if needed.
2. Ethics of publication – how to cite? A short presentation given by the trainer on plagiarism and auto-plagiarism issues. The principles of quoting the fragments of books and journals as well of inserting the images, illustrations, graphs, etc.
3. Bibliometric tools. A short trainer's presentation on principles of bibliometrics. Description of different bibliometric tools. Nowadays, bibliometrics is very important for researchers as more and more often it becomes an assessment tool of the research output, needed for applying for research funding. It helps also to determine the number of citations of one's publication as well as to determine the quality of used scientific journals.

Exercise – try to prepare the citations' report of the lecturers from your department. Use the database appropriate for your field of study.

4. Archiving – how to archive one's own publications? A short presentation of a procedure of uploading the works into the institutional repository (that students have already browsed during session 1).

Exercise (during the session, to continue afterwards) – prepare the final assessment of the training. A short (5 minutes) oral presentation of your research topic and the printed list of references, generated from RMS according to the reference style used in the chosen journal of your domain.

4.11.6.6 Session 6 – 1,5 hour – Presentation of students' final projects

This session is entirely dedicated to the evaluation of final projects prepared by students (for details of assessment and evaluation, see section 4.11.7). Each participant has five minutes for oral presentation of

her/his research topic in front of the whole group (taking into account the issues described in section 4.11.7). She/he must also provide a reference list, prepared according to requirements of one of the journals of her/his domain (indicating of each one).

At the end of the session, the trainer gives students the evaluation form (elaborated according to issues described in section 4.11.7).

4. 11.7 Assessment and evaluation of the course

Johanna Tuñon (2002) discusses the introduction of IL course for doctoral students at Nova Southeastern University (Florida, the USA). At the beginning the aim of the course was to assess students after completing each module. However, this idea was rejected, because as she writes, "doctoral students might feel that they were being treated like undergraduates" (p. 520).

That is why, in the case of this course, the only one assignment will be planned for the end of the course. It will consist of two parts. The first one will be the preparation of an annotated bibliography on a research topic, including (if possible) all types of resources discussed during the training. The reference list will be built block by block after each course module and will contain the elements of research process related to literature review, like: searching, evaluating, collecting, arranging with bibliography management tool, and generating the bibliography.

The second part will be, as suggested by Daugman et al. (2012), a short class presentation given by each student on the project topic. The presentation will also have to find answers on the following issues:

- Brief introduction to your topic;
- Overview of your research process;
- What problems did you have?
- What unexpected discoveries did you make or unanticipated paths did you uncover?

- What would you want your fellow students to know about your research experience?
- In summary, what did you learn about the research process in your domain?

As for course evaluation, Daugman et al. suggest to query students on the following issues:

- Topics or sessions found to be most valuable and least valuable
- Perceived problems of the course
- Effectiveness of technology used in the course
- Opinion, expressed in a Likert scale, on the instructors' competence, preparedness, enthusiasm, and encouragement of critical thinking.

This kind of course evaluation can be also applied to the course suggested in this chapter, but it seemed more appropriate to conduct this query within the focus group and not individually.

Conclusions

This thesis aimed at the discussion of the problem of enhancement the use of scientific journals by shaping information literacy. Because the direct relationship between the IL education and the use of scientific journals was observed, and the initial hypothesis o low use of scientific journals was established, the purpose was to investigate whether this hypothesis can be verified and whether this is a noticeable problem among French and Polish doctoral students.

The starting point was the investigation of general issues and background of IL as well as its main initiatives, key-documents, organisations dealing with the problem, and standards and guidelines. Then the analysis of IL advancement in France and Poland was conducted (see Chapter 1). This basis gave the framework and justification to conduct the empirical study (see Chapter 2). The findings of the study drafted the way for the further steps undertaken during the work on this dissertation, i.e. the description of theoretical pedagogical issues necessary for establishing the IL education (see Chapter 3), discussing the existing IL education programme for doctoral students, and, finally, mapping out the author's IL course, aimed at helping doctoral students in their research (see Chapter 4).

This thesis falls in line with several studies conducted recently in order to deepen and develop the domain of IL but also with user studies research.

The exhaustive analysis of French and Polish body of literature showed how much work is still to be done in both countries and how many topics have never been discussed neither by French nor by Polish authors. Especially the issues related to the pedagogy of IL, presented in Chapter 3 of this dissertation.

The research problems raised in Introduction (to recall: Why do students rarely use scientific journals?; Is it related to the library offer?; What should be done in order to increase the use of scientific journals?) were investigated during the comparative study with the research sample of 578 doctoral students from Warsaw and Lille. The findings of the study allow to confirm

that the methodology chosen for the purpose of this research (to recall: questionnaire, grounded theory, observations) was right and appropriate in this kind of study. In spite of some limitations (described in details in Chapter 2, section 2.10), the study helped answer on the raised research problems. The initial hypothesis related to the low use of scientific journals was not fully verified. The doctoral students willingly read scientific journals both in print and electronic format. They are aware of the importance of this source of information, however the study revealed that they do not use scientific journals extensively enough and in a conscious way. This finding gave the answer on the question related to the library offer. The relationship between the use of scientific journals and the offer of the library is crucial. The main findings of the comparative study are, to recall, the lack of specialised library instruction dedicated to doctoral students (in the case of Poland); and the lack of promotion or popularisation of such instruction among doctoral students and lecturers who could encourage their students to participate (in the case of France). These findings allowed to reflect on the last research problem: what should be done in order to increase the use of scientific journals?; however the findings added a sub-problem and reformulated the problem on: what should be done with IL education offer in libraries in order to increase the use of scientific journals? The most important potential future undertakings were described in the section Future studies direction (Chapter 2, section 2.12). Among eight issues suggested there, the most crucial seem to be: the need of work on the universities forums, aiming at legitimisation of IL and its implementation into university strategies and curricula in both countries; and the cooperation between librarians and faculties, and common advocacy for IL at the university administration level.

Certain limitations of the study were inevitable. They were described in details in Chapter 2, section 2.10. Those limitation allowed to mark the paths for potential future analysis. The most important one is to narrow the future

target group and to concentrate on a deepened research related to one or two disciplines with detailed sub-domains partition.

The ambitious goal of this thesis' author was to conclude the research with the framework of IL education programme addressed to doctoral students. This is a practical input to presented here theoretical doctoral research. The wish of author – a practicing librarian – was to give information professionals a direct tip that they can adjust and use in their work with advanced users of information, i.e. doctoral students.

The suggested educational programme might help in enhancing the use of scientific journals, familiarize doctoral students with research and publication process, and, more generally, might reinforce scientific communication. The training will form good habits and present good practices of management of research information. In this way the educational programme anwers the needs explored and investigated in this thesis.

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Appendix 1 — List of abbreviations

AASL – American Association of School Libraries
ACRL – Association of Colleges and Research Libraries
ALA – American Library Association
ANZIIL – Australian and New Zealand Institute for Information Literacy
CILIP - Chartered Institute of Library and Information Professionals (formerly: Library
Association)
DOAJ – Directory of Open Access Journals
EnIL – The European Network for Information Literacy
ENSSIB – Ecole nationale superieure des sciences de l'information et des
bibliotheques
ERIC – Education Resource Information Center
ERTé – Equipe de recherche en technologie educative
FORMIST – Formation à l'Information Scientifique et Technique
GERiiCO – Groupe d'Etudes et de Recherche Interdisciplinaire en Information et
Communication
GT – grounded theory
HE – higher education
HAL – Hyper Articles en Ligne
HILT – Handbook of Information Literacy Teaching
ICT – information and communication technologies
IFLA – The International Federation of Library Associations and Institutions
IL – Information Literacy
ILU – Information Literacy University
INIST – L'Institut de l'Information Scientifique et Technique
IT – Information Technology
LAMP – Literacy Assessment for Monitoring Programme
LIS – Library and Information Science
OECD – Organisation for Economic Cooperation and Development
OPAC – Online Public Access Catalog
PBL – Problem-Based Learning
PISA – Programme for International Student Assessment
PLA – Polish Librarians' Association
PRLT – Peer Review of Learning and Teaching
RMS – reference management software
SCONUL – Society of College, National and University Libraries
SIC – Sciences de l'Information et de la Communication

SUDOC – Systeme Universitaire de Documentation
TEL – Thèses en Ligne
UIS – UNESCO Institute for Statistics
UNESCO – United Nations Educational, Scientific and Cultural Organization
URFIST – Unite regionale de formation a l'information scientifique et technique

Appendix 2 — Grunwald Declaration on Media Education

This declaration was issued unanimously by the representatives of 19 nations at UNESCO's 1982 International Symposium on Media Education at Grunwald, Federal Republic of Germany. It is reproduced here since media teachers may well find it useful to quote or cite in preparing rationales, justifications or explanatory documents relating to media education.

'**We live in a world where media are omnipresent**: an increasing number of people spend a great deal of time watching television, reading newspapers and magazines, playing records and listening to the radio. In some countries, for example, children already spend more time watching television than they do attending school.

'Rather than condemn or endorse the undoubted power of the media, we need to accept their significant impact and penetration throughout the world as an established fact, and also appreciate their importance as an element of culture in today's world. The role of communication and media in the process of development should not be underestimated, nor the function of media as instruments for the citizen's active participation in society. Political and educational systems need to recognize their obligations to promote in their citizens a critical understanding of the phenomena of communication.

'Regrettably most informal and non-formal educational systems do little to promote media education or education for communication. Too often the gap between the educational experience they offer and the real world in which people live is disturbingly wide. But if the arguments for media education as a preparation for responsible citizenship are formidable now, in the very near future with the development of communication technology such as satellite broadcasting, two-way cable systems, television data systems, video cassette and disc materials, they ought to be irresistible, given the increasing degree of choice in media consumption resulting from these developments.

'Responsible educators will not ignore these developments, but will work alongside their students in understanding them and making sense of such consequences as the rapid development of two-way communication and the ensuing individualization and access to information.

'This is not to underestimate the impact on cultural identity of the flow of information and ideas between cultures by the mass media.

‘The school and the family share the responsibility of preparing the young person for living in a world of

powerful images, words and sounds. Children and adults need to be literate in all three of these symbolic systems, and this will require some reassessment of educational priorities. Such a reassessment might well result in an integrated approach to the teaching of language and communication.

‘Media education will be most effective when parents, teachers, media personnel and decision-makers all acknowledge they have a role to play in developing greater critical awareness among listeners, viewers and readers. The greater integration of educational and communications systems would undoubtedly be an important step towards more effective education.

‘We therefore call upon the competent authorities to:

1. initiate and support comprehensive media education programs - from pre-school to university level, and in adult education - the purpose of which is to develop the knowledge, skills and attitudes which will encourage the growth of critical awareness and, consequently, of greater competence among the users of electronic and print media. Ideally, such programs should include the analysis of media products, the use of media as means of creative expression, and effective use of and participation in available media channels;

2. develop training courses for teachers and intermediaries both to increase their knowledge and understanding of the media and train them in appropriate teaching methods, which would take into account the already considerable but fragmented acquaintance with media already possessed by any students;

3. stimulate research and development activities for the benefit of media education, from such domains as psychology, sociology, and communication science;

4. support and strengthen the actions undertaken or envisaged by UNESCO and which aim at encouraging international co-operation in media education.’

Grunwald, Federal Republic of Germany, 22 January 1982

Appendix 3 — The Alexandria Proclamation on Information Literacy and Lifelong Learning. Beacons of the Information Society

Celebrating this week's confirmation of the site of the Pharos of Alexandria, one of the ancient wonders of the world, the participants in the High Level Colloquium on Information Literacy and Lifelong Learning held at the Bibliotheca Alexandrina on 6-9 November 2005 proclaim that information literacy and lifelong learning are the beacons of the Information Society, illuminating the courses to development, prosperity and freedom.

Information Literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations.

Lifelong learning enables individuals, communities and nations to attain their goals and to take advantage of emerging opportunities in the evolving global environment for shared benefit. It assists them and their institutions to meet technological, economic and social challenges, to redress disadvantage and to advance the well being of all.

Information literacy

- comprises the competencies to recognize information needs and to locate, evaluate, apply and create information within cultural and social contexts;

- is crucial to the competitive advantage of individuals, enterprises (especially small and medium enterprises), regions and nations;

- provides the key to effective access, use and creation of content to support economic development, education, health and human services, and all other aspects of contemporary societies, and thereby provides

the vital foundation for fulfilling the goals of the Millennium Declaration and the World Summit on the Information Society; and

- extends beyond current technologies to encompass learning, critical thinking and interpretative skills across professional boundaries and empowers individuals and communities.

Within the context of the developing Information Society, we urge governments and intergovernmental organizations to pursue policies and programs to promote information literacy and lifelong learning. In particular, we ask them to support

- regional and thematic meetings which will facilitate the adoption of information literacy and lifelong learning strategies within specific regions and socioeconomic sectors;

- professional development of personnel in education, library, information, archive, and health and human services in the principles and practices of information literacy and lifelong learning;

- inclusion of information literacy into initial and continuing education for key economic sectors and government policy making and administration, and into the practice of advisors to the business, industry and agriculture sectors;

- programs to increase the employability and entrepreneurial capabilities of women and the disadvantaged, including immigrants, the underemployed and the unemployed; and

- recognition of lifelong learning and information literacy as key elements for the development of generic capabilities which must be required for the accreditation of all education and training programs.

We affirm that vigorous investment in information literacy and lifelong learning strategies creates public value and is essential to the development of the Information Society.

Adopted in Alexandria, Egypt at the Bibliotheca Alexandrina on 9 November 2005.

Appendix 4 — The Prague Declaration "Towards an Information Literate Society"

We the participants at the Information Literacy Meeting of Experts, organized by the US National Commission on Library and Information Science and the National Forum on Information Literacy, with the support of UNESCO, representing 23 countries from all of the seven major continents, held in Prague, the Czech Republic, September 20—23, 2003, propose the following basic Information Literacy principles:

• The creation of an Information Society is key to social, cultural and economic development of nations and communities, institutions and individuals in the 21st century and beyond.

• Information Literacy encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand;

it is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of life long learning.

• Information Literacy, in conjunction with access to essential information and effective use of information and communication technologies, plays a leading role in reducing the inequities within and among countries and peoples, and in promoting tolerance and mutual understanding through information use in multicultural and multilingual contexts.

• Governments should develop strong interdisciplinary programs to promote Information Literacy nationwide as a necessary step in closing the digital divide through the creation of an information literate citizenry, an effective Civil Society and a competitive workforce.

• Information Literacy is a concern to all sectors of society and should be tailored by each to its specific needs and context.

• Information Literacy should be an integral part of Education for All, which can contribute critically to the achievement of the United Nations Millennium Development Goals, and respect for the Universal Declaration of Human Rights.

In the above context, we propose for the urgent consideration of governments, Civil Society and the international community the following policy recommendations:

• The September 2003 Prague Meeting Report should be studied and its recommendations, strategic plans and research initiatives implemented expeditiously as appropriate (the report will be disseminated in December 2003).

• The progress in, and opportunities for implementation of the above should be assessed by an International Congress on Information Literacy, which could be organized in the first half of 2005.

• The possibility of inclusion of Information Literacy within the United Nations Literacy Decade (2003—2012) should be considered by the international community.

Appendix 5 — The Moscow Declaration on Media and Information Literacy

Moscow, 28 June, 2012

The changing media landscape and the rapid growth in information are affecting individuals and societies now more than ever. In order to succeed in this environment, and to resolve problems effectively in every facet of life, individuals, communities and nations should obtain a critical set of competencies to be able to seek, critically evaluate and create new information and knowledge in different forms using existing tools, and share these through various channels. This literacy creates new opportunities to improve quality of life. However, individuals, organizations, and societies have to address existing and emerging barriers and challenges to the free and effective use of information, including, but not exhausted by, the following:

- Limited capacities, resources and infrastructure;
- Censorship, limited information in the public domain, commercialization, privatization, and monopolization of information;
- Lack of respect for cultural and linguistic diversity;
- Excessive and inappropriate legal barriers to accessing, distributing and owning information;
- Lack of awareness of long-term preservation of information, particularly personal digital information; and
- Lack of cross-sectoral and interdisciplinary collaboration among stakeholders (between librarians and media educators, between mass media outfits and academic organisations, etc.).

With this context, the International Conference Media and Information Literacy for Knowledge Societies that was held in Moscow on 24-28 June 2012 aimed at raising public awareness of the significance, scale and topicality of the tasks of media and information literacy advocacy among information, media and educational professionals, government executives, and the public at large; at identifying key challenges and outlining policies and professional strategies in this field; and at contributing to improving international, regional and national response to Media and Information Literacy (MIL) issues.

The Conference was organized by the Ministry of Culture of the Russian Federation, the Federal Agency for Press and Mass Communications, the Commission of the Russian Federation for UNESCO, UNESCO Information for All Programme and UNESCO Secretariat, the International Federation of Library Associations and Institutions (IFLA), the UNESCO Institute for Information Technologies in Education, the Russian Committee of the UNESCO Information for All Programme, and the Interregional Library Cooperation Centre, within the

framework of Russia's chairmanship in the Intergovernmental UNESCO Information for All Programme.

The Conference gathered nearly 130 participants from 40 countries representing all continents: executives and experts of key specialized international governmental and nongovernmental agencies and organizations; leading world experts in the field of knowledge societies building; leading researchers and professors of journalism, librarianship and education; executives and representatives of government authorities responsible for educational institutions, libraries, and print and electronic media; representatives of international and national associations of media and information literacy professionals; representatives of organizations and institutions engaged in publishing professional literature on media and information literacy; and media practitioners.

The Conference participants agreed on the following:

1. Media and Information Literacy (MIL) is a prerequisite for the sustainable development of open, plural, inclusive and participatory knowledge societies, and the civic institutions, organizations, communities and individuals which comprise these societies.

2. MIL is defined as a combination of knowledge, attitudes, skills, and practices required to access, analyse, evaluate, use, produce, and communicate information and knowledge in creative, legal and ethical ways that respect human rights. Media and information literate individuals can use diverse media, information sources and channels in their private, professional and public lives. They know when and what information they need and what for, and where and how to obtain it. They understand who has created that information and why, as well as the roles, responsibilities and functions of media, information providers and memory institutions. They can analyze information, messages, beliefs and values conveyed through the media and any kind of content producers, and can validate information they have found and produced against a range of generic, personal and

context-based criteria. MIL competencies thus extend beyond information and communication technologies to encompass learning, critical thinking and interpretive skills across and beyond professional, educational and societal boundaries. MIL addresses all types of media (oral, print, analogue and digital) and all forms and formats of resources.

3. The MIL concept builds on prior international documents such as the Prague Declaration "Towards an Information Literate Society" (2003); Alexandria Proclamation "Beacons of the Information Society" (2005); Fez Declaration on Media & Information Literacy (2011); and the IFLA Media & Information Literacy recommendations (2011). MIL underpins essential competencies needed to work effectively towards achievement of the UN Millennium Development goals, the

UN Declaration on Human Rights, and the goals promoted by the World Summit on the Information Society.

4. In order to achieve these goals, individuals, communities, businesses, organizations and nations continually need information about themselves and their physical and social environments, and an understanding of the many different media through which such information is found, understood and communicated. Yet the media are in a constant state of change. New technological developments continue to alter the parameters of work, leisure, family life and citizenship. All around the world, people are living in an environment increasingly defined by the convergence of different media, interactivity, networking and globalization. Particularly (but not only) for younger people, the importance of media and peer networks has increased, and a greater part of growing up takes place outside the traditional learning environments. The creation of media today no longer lies in the hands of a limited group of professionals; now everyone can generate it.

5. At the same time, digital divides remain significant. Many people in developing countries have no access to information and media at all. Even in the developed world, limitations are placed on physical access to technologies and many people at all levels lack the critical and higher-order thinking skills needed to make informed decisions and solve problems in every aspect of life (e.g., personal, social, educational, professional aspects at local, national, regional and international levels).

Considering all the above, the participants of the International Conference Media and Information Literacy for Knowledge Societies address heads of state; the UN system (particularly UNESCO), IGOs, NGOs ; education and research institutions and professional associations; media institutions; cultural and social institutions; networks; and the business and industry sector with the following proposals:

a. Recognize that MIL is essential to the well-being and progress of the individual, the community, the economy and civil society;

b. Integrate MIL promotion in all national educational, cultural, information, media and other policies;

c. Outline responsibilities, develop capacity and promote collaboration between and among the different stakeholders (government, educational, media and youth organizations, libraries, archives, museums, and NGOs, among others).

d. Encourage education systems to initiate structural and pedagogical reforms necessary for enhancement of MIL;

e. Integrate MIL in the curricula including systems of assessment at all levels of education, inter alia, lifelong and workplace learning and teacher training;

f. Prioritize support to networks and organizations working on MIL issues, and invest in capacity building;

g. Conduct research on and develop tools for MIL, including frameworks for understanding, evidence-based practices, indicators and assessment techniques;

h. Develop and implement MIL standards;

i. Promote MIL related competencies which support reading, writing, speaking, listening and viewing;

j. Encourage an intercultural dialogue and international cooperation while promoting MIL worldwide;

k. Invest in processes which support long-term preservation of digital information;

l. Promote and protect the rights to freedom of expression, freedom of information, right to privacy and confidentiality, ethical principles and other rights.

This document was produced through a collaborative process involving participants from the following 40 countries: Argentina, Australia, Azerbaijan, Bangladesh, Belarus, Brazil, Canada, Cape Verde, China, Croatia, Egypt, Finland, France, Germany, Hungary, India, Iraq, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lebanon, Lithuania, Malaysia, Mexico, Moldova, the Netherlands, Norway, the Philippines, Poland, Qatar, the Russian Federation, Serbia, Sudan, Turkey, Ukraine, the United Kingdom, the United States of America, and Zambia.

Appendix 6 — University of Warsaw Faculties

Polish name of faculty	English name of faculty[70]	Field of research
Wydział Biologii	Faculty of Biology	Pure Sciences
Wydział Chemii	Faculty of Chemistry	Pure Sciences
Wydział Dziennikarstwa i Nauk Politycznych	Faculty of Journalism and Political Science	Social Sciences
Wydział Filozofii i Socjologii	Faculty of Philosophy and Sociology	Social Sciences
Wydział Fizyki	Faculty of Physics	Pure Sciences
Wydział Geografii i Studiów Regionalnych	Faculty of Geography and Regional Science	Pure Sciences
Wydział Geologii	Faculty of Geology	Pure Sciences
Wydział Historyczny	Faculty of History	Humanities
Wydział Lingwistyki Stosowanej	Faculty of Applied Linguistics	Applied Sciences Humanities Social Sciences
Wydział Matematyki, Informatyki i Mechaniki	Faculty of Mathematics, Informatics and Mechanics	Pure Sciences
Wydział Nauk Ekonomicznych	Faculty of Economic Sciences	Social Sciences
Wydział Neofilologii	Faculty of Modern Languages	Humanities Social Sciences
Wydział Orientalistyczny	Faculty of Oriental Studies	Humanities Social Sciences
Wydział Pedagogiczny	Faculty of Education	Applied Sciences Social Sciences
Wydział Polonistyki	Faculty of Polish Studies	Humanities
Wydział Prawa i Administracji	Faculty of Law and Administration	Social Sciences
Wydział Psychologii	Faculty of Psychology	Applied Sciences Social Sciences
Wydział Stosowanych Nauk Społecznych i Resocjalizacji	Faculty of Applied Social Science and Resocialisation	Social Sciences
Wydział Zarządzania	Faculty of Management	Social Sciences

[1] English names are retieved from the webpages of faculties.

Appendix 7 — Universities of Lille Doctoral Schools (Ecoles Doctorales)

French name of school	English name of school[71]	Field of science
University of Lille 1		
SMRE - Sciences de la Matière, du Rayonnement et de l'Environnement	Science of matter, radiation and environment	Pure Sciences
University of Lille 1 and University of Lille 2		
SESAM - Sciences économiques, sociales, de l'aménagement et du management	Economics, social sciences, planning, and management	Social Sciences
BIO SANTE – Biologie nté	Biology and Health	Pure Sciences Applied Sciences
University of Lille 2		
SJPG – Sciences Juridiques, Politiques et de Gestion	Law, Politics and Management Sciences	Applied Sciences Social Sciences
University of Lille 3		
SHS - Sciences de l'Homme et de la Société	Human and Society Sciences	Humanities Social Sciences

[71] English names are retrieved from the webpages of doctoral schools.

Appendix 8 — Questionnaire distributed among the doctoral students of the University of Warsaw and the University of Lille (three language versions)

English version

Detailed questions:

1. Do you use the Library electronic catalogue? Yes/No
2. What kind of search do you use while searching in Library electronic catalog:
- simple search?
- advanced search?
3. Do you know NUKAT (in version for Polish students)/SUDOC (in version for French students) catalog? Yes/No (if no, go to q.8) (if yes: very often/often/sometimes/never)
4. Do you use this catalog?

5. Do you use the paper catalog of serials (question only for UW students)? Yes/No
6. Have you been already participating in the library instruction? Yes/No (if no, go to q.6)
7. Was it:
   - group training in the library building?

   - e-learning (online course)?

8. Do you read scientific journals from your field of studies? Yes/No (if yes: very often/often/sometimes/never)
9. For what purpose do you read scientific journals?
   - your thesis or dissertation? (+ question: what will be the estimated number of journal articles in your thesis/dissertation bibliography?)
   - your preparation for classes? (+ question: if your lecturer asks you to read certain articles or do you do it of your own will?)
   - your personal use? (+ question: is it connected with your study field or not?)
10. Are you aware of the existence of several thousands of online scientific journals accessible at the University of Warsaw/the University of Lille? Yes/No (if no, go to q.17)
11. Do you read electronic journals the library provides? (very often/often/sometimes/never)
12. Was it explained during your library instruction? Yes/No (if no, go to q.14)
13. Do you think it was explained efficiently for you to use it individually afterwards? Yes/No (+ few lines for personal remarks)

14. Do you know the AtoZ list (version for Polish students)/catalog of online journals (version for French students)? Do you know what does it serve for? Yes?No (if no, go to q. 16)
15. Do you use the AtoZ list (version for Polish students)/catalog of online journals (version for French students) to search electronic journals? Yes/No (if yes: very often/often/sometimes/never)
16. Do the library instruction and didactic materials on how to use electronic journals are sufficient for you? Yes/No
17. Would you be interested in some additional bibliographic instruction on how to use the journals for the research work? Yes/No
18. What would be the main obstacles for not using scientific journals or rarely using them for your information needs? You can mark more than one:
- No obstacles – I use scientific journals very often;
- I was not informed about the importance of scientific journals;
- I was not trained how to access and use journals;
- I do not know how to search in journals bibliographies;
- the library does not help me improve my knowledge about scientific journals;
- there are no librarians who how to help me in searching scientific journals (print and electronic);
- I read only the articles that my lecturers ask me to read;
- most of scientific journals (especially electronic ones) are in foreign languages;
- most of the scientific journals provided by the library are not related to my field;
- the electronic journals the library provides are not clear and easy to use;
- the printed journals the library provides are not comfortable in usage.

19. Are you aware of the existence of the open online archives and repositories? Yes/No (if no, don't answer q.20)
20. Have you already published any of your works in such an archive or repository? Yes/No (if yes - In which one? Write the name)

<u>General questions:</u>

1. Gender F/M

2. What is the year of your studies? 1/2/3/4 (In Poland –PhD: 4 years)

3. What is your field of study ? (Social Sciences/ Humanities/Pure Sciences/Applied Sciences)

4. What is your English Language Proficiency?
(None/Poor/Average/Good/Very good)

5. What other foreign languages do you know? What is its proficiency?

Polish version

Pytania szczegółowe:

1. Czy korzysta Pani/Pan z elektronicznego katalogu biblioteki (tzw. OPAC)? Tak/Nie

2. Z jakiego typu wyszukiwania korzysta Pani/Pan najczęściej, przeszukując OPAC?

- wyszukiwanie proste?

- wyszukiwanie zaawansowane?

3. Czy zna Pani/Pan katalog NUKAT? Tak/Nie (jeśli nie, proszę przejść do pyt. 5).

4. Jak często korzysta Pani/Pan z katalogu NUKAT? (bardzo często/często/czasami/nigdy)

5. Czy korzysta Pani/Pan z kartkowego katalogu czasopism (wydawnictw ciągłych)? Tak/Nie

6. Czy kiedykolwiek uczestniczył(a) Pani/Pan w szkoleniu bibliotecznym? Tak/Nie (jeśli nie, proszę przejść do pyt. 8)

7. Czy było to:

- szkolenie grupowe w budynku biblioteki?

- szkolenie online?

8. Czy czyta Pani/Pan czasopisma naukowe ze swojej dziedziny nauki? (bardzo często/często/czasami/nigdy)

9. W jakim celu czyta Pani/Pan czasopisma naukowe?

- do pracy doktorskiej? Tak/Nie (jeśli tak – jaka będzie szacowana liczba artykułów z czasopism w bibliografii Pani/Pana pracy doktorskiej?)
- przygotowując się do zajęć? Tak/Nie (dodatkowe pytanie – czy wykładowcy proszą o przeczytanie konkretnych artykułów, czy też robi to Pani/Pan z własnej inicjatywy?)
- dla własnych potrzeb? Tak/Nie (jeśli tak – czy są one powiązane z Pani/Pana dziedziną nauki? Tak/Nie)

10. Czy jest Pani/Pan świadoma(y) istnienia kilkudziesięciu tysięcy czasopism naukowych online dostępnych na Uniwersytecie Warszawskim? Tak/Nie (jeśli nie – proszę przejść do pyt. 17)

11. Czy czyta Pani/Pan czasopisma elektroniczne dostępne na UW? (bardzo często/często/czasami/nigdy)

12. Czy dostęp do czasopism elektronicznych był omawiany podczas szkolenia bibliotecznego? Tak/Nie (jeśli nie- proszę przejść do pyt. 14)

13. Czy uważa Pani/Pan, że to zagadnienie było wytłumaczone wystarczająco do późniejszego prowadzenia samodzielnego wyszukiwania? Tak/Nie (+ pole na uwagi)

14. Czy zna Pani/Pan listę AtoZ? Czy wie Pani/Pan do czego służy ten produkt? Tak/Nie (jeśli nie – proszę przejść do pyt. 16)

15. Czy używa Pani/Pan listyAtoZ, aby wyszukiwać czasopisma elektroniczne? (bardzo często/często/czasami/nigdy)

16. Czy szkolenie i pomoce biblioteczne dotyczące korzystania z czasopism elektronicznych są w Pani/Pana przekonaniu wystarczające? Tak/Nie

17. Czy był(a)by Pani/Pan zainteresowany dodatkowym szkoleniem bibliograficznym dotyczącym wykorzystywania czasopism do pracy naukowej? Tak/Nie

18. Co może być w Pani/Pana przekonaniu największą przeszkodą w korzystaniu z czasopism naukowych? (Można zaznaczyć więcej niż jedną odpowiedź)

- nie ma żadnych przeszkód – często korzystam z czasopism naukowych
- nigdy nikt nie informował mnie o ważności czasopism naukowych
- nie szkolono mnie jak korzystać z czasopism
- nie wiem jak przeszukiwać bibliografie czasopism
- biblioteka nie pomaga mi w zwiększaniu mojej wiedzy na temat czasopism naukowych
- nie ma zbyt wielu bibliotekarzy potrafiących pomóc mi w przeszukiwaniu czasopism naukowych (drukowanych i elektronicznych)
- czytam tylko artykułu polecane przez wykładowców
- większość czasopism naukowych (szczególnie elektronicznych) jest w językach obcych
- większość czasopism naukowych oferowanych przez bibliotekę nie jest związana z moją dziedziną wiedzy
- korzystanie z czasopism elektronicznych dostępnych na UW jest skomplikowane
- korzystanie z czasopism drukowanych dostępnych na UW jest

niewygodne

19. Czy jest Pani/Pan świadoma(y) istnienia otwartych archiwów naukowych i repozytoriów online? Tak/Nie (jeśli nie – proszę przejść do pyt. 20)

20. Czy przekazywał(a) już Pani/Pan swoje prace do tego typu archiwów lub repozytoriów? Tak/Nie (jeśli tak – proszę podać nazwę repozytorium)

Pytania dotyczące ankietowanych:

1. Płeć: Mężczyzna/Kobieta

2. Na którym roku studiów doktoranckich jest Pani/Pan obecnie? 1/2/3/4

3. Jaka jest dziedzina Pani/Pana studiów? (Nauki społeczne/Nauki humanistyczne/Nauki ścisłe/Nauki stosowane)

4. Jaki jest poziom Pani/Pana znajomości języka angielskiego? (żaden/słaby/średni/dobry/bardzo dobry)

5. Jakie inne języki obce Pani/Pan zna? Jaki jest poziom ich znajomości? (Proszę wpisać według wzoru: język - stopień znajomości)

French version

Questions detailées :

1. Utilisez-vous le catalogue électronique de la bibliothèque ? Oui/Non

2. Quelle type de recherche utilisez-vous pendant que vous cherchez dans le catalogue de la bibliothèque ?

- recherche simple ?

- recherche avancée ?

3. Connaissez-vous le catalogue SUDOC ? Oui/Non (Si non, allez à la question 7)

4.Utilisez-vous le catalogue SUDOC ? (très souvent/ souvent/ parfois/ jamais)

5.Avez-vous déjà participé à une formation organisée par la bibliothèque ? Oui/Non (Si non, allez à la question 7)

6.Etait-ce :

- une formation de groupe dans la bibliothèque ?

- un cours à distance en ligne ?

7. Lisez-vous des revues scientifiques en rapport avec votre champ d'études ? (très souvent/souvent/parfois/jamais)

8. A quels propos utilisez-vous les revues scientifiques

- pour vos thèses ou mémoires ? Oui/Non (Si oui : quelle sera approximativement le nombre d'articles de revues dans votre bibliographie ?)
- pour vos travaux de cours ? Oui /Non (Si oui : cela vous est-il demandé par votre enseignant ou bien le faits-vous de propre chef ?)
- pour votre usage personnel ? Oui/ Non (cela est-il lié à votre champ d'étude ou non ?)

9. Etes-vous au courant de l'existence de plusieurs milliers de revues scientifiques accessibles en ligne à votre Université ? Oui/Non (Si non, allez à la question 16)

10. Lisez-vous les revues électroniques fournis par l'Université ? (très souvent / souvent / parfois/jamais)

11. Est-ce que l'accès aux réssources électroniques a-t-il été expliqué pendant votre formation à la bibliothèque ? Oui/Non (Si non, allez à la question 14)

12. Pensez-vous que cela vous a été efficacement expliqué pour un usage individuel après ? Oui/Non (Vous pouvez ajouter des remarques personnelles)

13. Connaissez-vous les catalogues de revues en ligne ? Savez-vous à quoi ils servent ? Oui/Non (Si non, allez à la question 16)

14. Utilisez-vous ces catalogues de revues en ligne pour rechercher des revues en ligne ? (très souvent/souvent/parfois/jamais)

15. Jugez-vous suffisantes les instructions et la formation sur comment utiliser les revues en ligne ? Oui/Non

16. Seriez-vous intéressés par une bibliographie supplémentaire sur la formation à l'utilisation des revues pour le travail de recherche ? Oui/Non

17. Quels seraient selon vous, les principaux obstacles à l'utilisation des revues scientifiques ou la rareté de leur usage pour vos besoins d'information ? Plusieurs réponses possibles :

- Pas d'obstacles, je les utilise très souvent
- Je n'avais pas conscience de l'importance des revues scientifiques
- Je n'ai pas été formé à l'accès et l'usage des revues
- Je ne sais pas recherché dans les bibliographies de revues
- La bibliothèque ne m'a pas aidé à renforcer mes connaissances à propos des revues scientifiques
- Il n'y a pas assez de bibliothécaires sachant bien comment m'aider dans la recherche de revues scientifiques (imprimés et électroniques)
- Je ne lis que les articles suggérés par mes professeurs
- La plupart des revues (spécialement électroniques) sont en langue étrangère
- La plupart des revues scientifiques fournis par la bibliothèque ne couvrent pas mon champ d'études
- Les journaux électroniques fournis par la bibliothèque sont difficiles à utiliser et comprendre
- Les journaux imprimés fournis par la bibliothèque sont d'usage inconfortable

18. Etes-vous au courant de l'existence d'archives ouvertes et d'entrepôts en ligne ? Oui/Non (si non: allez à la question 21)

19. Avez déjà publié ou déposé vos travaux sur ces archives ou entrepôts ? Oui/Non

(Si oui, citez le ou les noms)

<u>Questions générales:</u>

1.Genre : M/F

2.Quel est votre année d'études ? (1ère, 2e ou 3e, 4e, 5e et plus)

3. Quel est votre champ d'études ? (Sciences sociales/ Sciences humaines/ Sciences exactes/ Sciences appliquées)

4.Quelle est votre niveau de compétence en anglais ? (aucune/faible/moyen/bien/excellent)

5. Quelle autre langue étrangère pratiquez-vous ? Quel est le niveau d'aptitude à cette langue ? Merci de notez ici selon le modèle: langue - le niveau

Appendix 9 — Covering letters sent to doctoral students at the University of Warsaw and University of Lille (two language versions)

Polish version

Szanowni Państwo,

Nazywam się Zuzanna Wiorogórska i jestem pracownikiem Oddziału Wydawnictw Ciągłych BUW.

Przygotowuję międzynarodową pracę doktorską w Instytucie Informacji Naukowej i Studiów Bibliologicznych UW oraz w Laboratorium GERiiCO Uniwersytetu Lille 3 we Francji.

Moja praca ma na celu porównanie korzystania z czasopism naukowych (drukowanych i elektronicznych) wśród doktorantów UW i UL 3 oraz opracowanie projektu edukacyjnego z zakresu informacji naukowej związanego z wykorzystaniem czasopism naukowych w środowisku akademickim.

Dane do pracy zostaną zebrane dzięki badaniom porównawczym wybranej populacji statystycznej obu uniwersytetów. Badania zaprezentują różnice w wykorzystaniu czasopism naukowych w zależności od dziedziny nauki, pozwolą także określić oczekiwania doktorantów w stosunku do kształtowania zbiorów czasopism naukowych w bibliotekach obu uniwersytetów. Projekt edukacyjny będzie opracowany na podstawie rezultatów badań potrzeb użytkowników i będzie oparty na koncepcji i normach alfabetyzacji informacyjnej (ang. *information literacy*).

W związku z tym, chciałabym zwrócić się do Państwa z prośbą o wzięcie udziału w badaniu (w formie ankiety online, której wypełnienie nie powinno zająć więcej niż 10 minut).

Link do ankiety: http://www.esurveyspro.com/Survey.aspx?id=c20a8cc4-7680-4153-9ccc-be3699e0a05b

Badanie jest anonimowe, z założeniem, że chętni do wzięcia udziału w drugim jego etapie mogą podać swój adres mailowy.

Na przeprowadzenie badań na Państwa Wydziale wyraził/-a zgodę Kierownik Studiów Doktoranckich, pani/pan Prof. …….. Państwa adresy mailowe dostałam za jej/jego wiedzą i pośrednictwem.

Państwa opinia się liczy. Z góry dziękuję za wzięcie udziału w badaniach.

Zuzanna Wiorogórska

French version

Cher(e)s doktorant(e)s,

Je m'appelle Zuzanna Wiorogorska et je suis doctorante en Sciences de l'Information et Communication au Laboratoire GERiiCO à l'Université Lille 3.

Je prépare un doctorat en cotutelle entre l'Université Lille 3 et l'Université de Varsovie (Polotne) intitulé « Shaping Information Literacy for enhancing the use of scientific journals: a comparative study on academic users' information behaviour » (fr. *Former à la culture informationnelle pour intensifier la consultation des revues scientifiques. Etude comportementale des usagers en milieu universitaire*).

Le but principal de ma recherche est de comparer l'usage des périodiques scientifiques (imprimés et électroniques) entre les doctorants de l'Université de Varsovie et des Universités Lille (Lille1, Lille2 et Lille3) et de préparer un projet éducatif dans le domaine de la culture informationnelle lié à l'usage des périodiques scientifique en milieu universitaire.

Les données seront collectées grâce aux études comparatives parmi la population statistique choisie dans les deux universités. Ces études montreront les différences entre l'usage de périodiques scientifique selon les domaines scientifiques, elles permettront aussi de décrire les attentes des étudiants de 3^{e} cycle en référence aux collections de périodiques scientifiques des bibliothèques universitaires. Les études comparatives permettront aussi d'estimer l'influence de la culture organisationnelle locale des bibliothèques universitaires à Lille et Varsovie sur le développement des compétences informationnelles des leurs usagers.

C'est pourquoi je voudrais vous demander de contribuer à ma recherche en remplissant un questionnaire en ligne (cela vous prendra env. 5 minutes). Lien vers le questionnaire : http://www.esurveyspro.com/Survey.aspx?id=cf057212-1e4e-4d7d-b3e5-3a05084d6c4c

Si la page ne s'ouvre pas tout de suite, veuillez y revenir un peu plus tard : la page a un accès simultané limité.

Le questionnaire est anonyme, mais au cas où vous seriez intéressé par une coopération plus tard, vous pouvez mentionner votre adresse Email dans l'espace prévu dans le questionnaire.

Votre opinion compte et merci beaucoup d'avance de participer à mon enquête.

Zuzanna Wiorogorska

Appendix 10 — Covering letters sent to professors responsible for doctoral studies at the University of Warsaw and University of Lille (two language versions)

Polish version

Szanowna Pani Profesor / Szanowny Panie Profesorze,

Nazywam się Zuzanna Wiorogórska i jestem pracownikiem Oddziału Wydawnictw Ciągłych BUW.

Przygotowuję międzynarodową pracę doktorską w Instytucie Informacji Naukowej i Studiów Bibliologicznych UW oraz w Laboratorium GERiiCO Uniwersytetu Lille 3 we Francji (promotorki pracy: Prof. UW dr hab. Barbara Sosińska-Kalata i Prof. Widad Mustafa El Hadi).

Praca, zatytułowana „Shaping Information Literacy for enhancing the use of scientific journals: a comparative study on academic users' information behaviour" (pol. "Kształtowanie alfabetyzacji

informacyjnej w celu wzrostu stopnia wykorzystania czasopism naukowych: badanie porównawcze postaw użytkowników w środowisku akademickim"), ma na celu porównanie korzystania z czasopism naukowych (drukowanych i elektronicznych) wśród doktorantów UW i UL 3 oraz opracowanie projektu edukacyjnego z zakresu informacji naukowej związanego z wykorzystaniem czasopism naukowych w środowisku akademickim.

Dane do pracy zostaną zebrane dzięki badaniom porównawczym wybranej populacji statystycznej obu uniwersytetów. Badania zaprezentują różnice w wykorzystaniu czasopism naukowych w zależności od dziedziny nauki, pozwolą także określić oczekiwania doktorantów w stosunku do kształtowania zbiorów czasopism naukowych w bibliotekach obu uniwersytetów. Projekt edukacyjny będzie opracowany na podstawie rezultatów badań potrzeb użytkowników i będzie oparty na koncepcji i normach alfabetyzacji informacyjnej (ang. 'information literacy').

W związku z tym, chciałabym zwrócić się do Pani Profesor / Pana Profesora jako Kierownik / Kierownika Studiów Doktoranckich na Wydziale… / w Instytucie …. z prośbą o pozwolenie przeprowadzenia takiego badania (w formie ankiety online, której wypełnienie nie powinno zająć doktorantom więcej niż 10 minut) w Pani / Pana Wydziale / Instytucie, a także o przesłanie mi listy mailingowej wszystkich doktorantów tak, abym mogła każdemu przesłać e-mail z informacją o badaniu i linkiem do ankiety. Jeżeli Pani Profesor / Pan Profesor nie posiada adresów

mailowych doktorantów, czy mogłabym prosić o przesłanie mojego listu do osoby, która na Państwa Wydziale zajmuje się bezpośrednim kontaktem z doktorantami?

To badanie jest ważne, będzie miało wpływ na przyszłą politykę gromadzenia i udostępniania czasopism naukowych na UW. Jako bibliotekarka od siedmiu lat zajmująca się czasopismami w BUW (od ponad dwóch lat jestem kierownikiem sekcji gromadzenia czasopism) obserwuję, że z jednej strony wykorzystanie czasopism nie jest zbyt duże, z drugiej – wciąż wielu jest przedstawicieli kierunków nieusatysfakcjonowanych z obecnej polityki gromadzenia, pomijającej (w ich przekonaniu) czasopisma -głównie elektroniczne- ważne dla ich dziedziny nauki. Zależy mi, aby to zmienić. Stąd moja inicjatywa badawcza.

Liczę na współpracę Pani Profesor / Pana Profesora.

Z wyrazami szacunku,

Zuzanna Wiorogórska

French version

Chère Professeure / Cher Professeur,

Je m'appelle Zuzanna Wiorogórska et je suis doctorante en Sciences de l'Information et Communication au Laboratoire GERiiCO à l'Université Lille 3.

Je prépare un doctorat en cotutelle entre l'Université Lille 3 et l'Université de Varsovie (Pologne) intitulé « Shaping Information Literacy for enhancing the use of scientific journals: a comparative study on academic users' information behaviour » (fr. *Former à la culture informationnelle pour intensifier la consultation des revues scientifiques. Etude comportementale des usagers en milieu universitaire*).

Le but principal de ma recherche est de comparer l'usage des périodiques scientifiques (imprimés et électroniques) entre les doctorants de l'Université de Varsovie et des Universités Lille (1, 2 et 3) et de préparer un projet éducatif dans le domaine de la culture informationnelle lié à l'usage des périodiques scientifique en milieu universitaire.

Les données seront collectées grâce aux études comparatives parmi la population statistique choisie dans les deux universités. Ces études montreront les différences entre l'usage de périodiques scientifique selon les domaines scientifiques, elles permettront aussi de décrire les attentes des étudiants de 3^{e} cycle en référence aux collections de périodiques scientifiques des bibliothèques universitaires. Les études comparatives permettront aussi d'estimer l'influence de la culture organisationnelle locale des bibliothèques universitaires à Lille et Varsovie sur le développement des compétences informationnelles des leurs usagers.

Le projet éducatif sera fondé sur les résultats de l'étude des besoins des utilisateurs et il sera basé principalement sur les concepts et les normes de la culture informationnelle (ang. *Information Literacy*).

C'est pourquoi, je voudrais vous demander de me permettre de mener ma recherche parmi les doctorants de votre Ecole Doctorale. Mon enquête est sous forme d'un questionnaire en ligne (dont le remplissage ne prend pas plus de 10 minutes). Dans le fichier attaché j'ai joint la lettre de recommandation écrite par ma directrice de recherche française, Prof. Widad Mustafa El Hadi. Pourriez-vous, en utilisant votre liste de diffusion, envoyer à vos étudiants, le lien vers ce questionnaire ainsi que ma lettre d'introduction ? Si vous êtes d'accord, je vais vous envoyer une lettre électronique adressée directement aux étudiants avec le lien à mon questionnaire.

Je suis à votre disposition au cas où vous voudriez me rencontrer, ou avoir des précisions supplémentaires.

Veuillez agréer, Chère Professeure / Cher Professeur, l'expression de mes sentiments les meilleurs.

Bien cordialement,

Zuzanna Wiorogórska

Appendix 11 — University of Lille 3. Doctoral studies ECTS credits model

MAQUETTE DE LA FORMATION DOCTORALE DE L'ED SHS N°473

Le doctorat équivaut à 180 crédits dont 60 crédits pour la formation doctorale et 120 crédits pour la thèse
La maquette ci-dessous constitue l'ensemble de la formation doctorale et non la formation annuelle,

elle n'est applicable que pour les doctorants inscrits à partir de 2009/2010

Validation par l'Ecole doctorale de 30 crédits

Module A1 (6 crédits) Formation interdisciplinaire - 1 élément à choisir dans la liste suivante

☐ séminaire « Etudes visuelles » *

☐ séminaire « Etudes européennes » *

☐ séminaire « Réception de l'antiquité »*

☐ séminaire « Santé : individu et société»*

☐ séminaire « Argumenter, Décider, Agir »*

☐ Autre *(sur proposition du doctorant et accord de l'ED)*

*** voir programme sur le site de l'ED SHS**

Module A2 (7 crédits) Complément de formation - 1 élément à choisir dans la liste suivante

☐ séminaire outils et méthodes orienté « études européennes » « *Connaissance et usage des sources* »*

☐ complément de formation : langues, DUFL, informatique, SCD, séminaire de master complémentaire, C2I 2e, autre complément…

☐ niveau B2 en langue française obligatoire pour les étrangers non francophones avant soutenance

☐ pour les doctorants en conuelle : validation de la langue de soutenance *(ou au choix: validation du module B1)*, si différente de l'écrit

☐ validation de la langue optionnelle choisie au CAPES, à l'Agrégation ou au Master

☐ statut de doctorant contractuel *(thèse d'un contrat doctoral)*

☐ validation du statut salarié pendant 1 an minimum *(travail de 50 à 100%)*

Module B1 (7 crédits) Langues - 1 élément à choisir dans la liste suivante

☐ niveau en langue anglaise B2 minimum au moment de la soutenance
(évaluation obligatoire par le passage d'un test EL-40 en 1ère année)

☐ pour les doctorants en conuelle validation de la langue de soutenance si différente de l'écrit *(ou au choix: validation du module A2)*

☐ validation de l'anglais par les : CAPES, Agrégation, Master d'anglais *(ou diplôme équivalent de traduction)*

Module B2 (8 crédits) Initiative du doctorant –

1 élément à choisir dans la liste suivante

☐ initiative scientifique du doctorant *(organisation de colloques, journées d'études, séminaire - mandat associatif: Espace doctorants ou universitaire, projet collectif, éditorial…)*

☐ initiative à visée sociale ou humanitaire *(responsabilité associative, caritative, humanitaire…)*

☐ ateliers d'insertion professionnelle *(2jrs de présence au même module=validation)*

☐ validation de l'activité complémentaire rémunérée des doctorants contractuels durant 1 année minimum

☐ validation du séjour de plus de 6 mois à l'étranger du doctorant en conuelle ou non (validation également du module C1 et D1)

☐ validation du statut salarié pendant un an minimum *(travail de 50 à 100%)*

Validation par le laboratoire de 30 crédits	
Module C1 (8 crédits) Formation disciplinaire de laboratoire - 1 élément à choisir dans la liste suivante ☐ séminaire disciplinaire de laboratoire ☐ Université d'été ☐ séminaire destiné au doctorant inscrit dans une des spécialités suivantes : Etudes européennes*, Etudes visuelles*, Santé : individu et société*, ADA*, Réception de l'antiquité*. ☐ séjour de plus de 3 mois à l'étranger du doctorant en cotutelle (*validation également du module D1*) ☐ validation du statut salarié pendant 1 an minimum (*travail de 50 à 100%)* ☐ Autre (*sur proposition du doctorant et accord du laboratoire*)	**Module D1 (7 crédits) Initiative scientifique –** **1 élément à choisir dans la liste suivante** ☐ participation aux activités du laboratoire *(co-organisation ou participation active à : journées d'études, colloques, journées « jeunes chercheurs »,* *projet ANR, exposition, performance artistique, ouvrage,* *traduction, actes de colloques, collaboration en groupe de travail, workshop….)* ☐ validation d'un stage d'au moins 2 semaines *hors université d'inscription et hors cotutelle*) : recherche en centre spécialisé, archives, bibliothèque, entreprise.. ☐ validation du séjour de 1 à 3 mois à l'étranger du doctorant en cotutelle ☐ validation du statut salarié pendant un an minimum *(travail de 50 à 100%) : aménagement possible avec l'accord de la direction du laboratoire*
Module C2 (7 crédits) Formation disciplinaire de laboratoire - 1 élément à choisir dans la liste suivante ☐ séminaire disciplinaire de laboratoire ☐ séminaire destiné au doctorant inscrit dans une des spécialités suivantes : Etudes européennes*, Etudes visuelle*s, Santé : individu et société*, ADA*, Réception de l'antiquité*.	**Module D2 (8 crédits) Diffusion de la recherche** ☐ 2 communications orales (JE, Colloque, Symposium ou séminaire de recherche) et 1 article accepté ou mis en ligne sur un site labellisé ou un poster (*article de revue, actes de colloque*)

Appendix 12 — University of Lille 3 Information Literacy Course

Ecole doctorale
Sciences de l'Homme et de la Société
Université Lille Nord de France

Module A2 : outils/méthodes

Formation à la maîtrise de l'information : ED SHS / SCD Lille 3

Cette formation se décline en six modules. Chaque module peut être suivi séparément.

Module	Description	Ressources	Modalités
Module 1 : Veille et stratégie de recherche	Choisir et utiliser les ressources documentaires pertinents pour ses recherches. Etablir une veille sur une thématique : création d'alertes dans une base de données.	Bases de données, catalogues, répertoires, moteurs de recherche, etc.	**3 séances de 2h** - veille et stratégie de recherche(catalogues et BdD) - approfondissement) - moteurs de recherche scientifiques
Module 2 : Gérer efficacement sa documentation	Utiliser un logiciel de gestion de références bibliographiques Zotero pour récupérer, classer et présenter une bibliographie selon la norme souhaitée.	Zotero + ressources documentaires	**2h**

Module 3 : **Structuration d'un doc numérique et circuit de la thèse**	Déposer sa thèse sous forme électronique		**2h**
Module 4 : Les droits et devoirs des auteurs	Savoir appliquer les règles du droit d'auteur à sa thèse. Connaître les risques/protections liés à internet**.**		**2h**
Module 5 : **Les enjeux de la publication scientifique**	Connaître les modes de publication de l'édition scientifique : archives ouvertes. Connaître les modes d'évaluation des chercheurs : notions de bibliométrie	Portails d'archives ouvertes.	**2h**
Module 6 : **Améliorer ses chances d'être publié**	Développer une stratégie de publication / de diffusion. Savoir gérer son identité numérique	Réseaux sociaux scientifiques et professionnels, carnets de recherche.	**2h**

English-French-Polish dictionary of terms related to Information Literacy

English	French	Polish
action research	recherche-action	badanie w działaniu
assessment	évaluation	ocena
Bologna Process	Processus de Bologne	Proces Boloński
competencies	compétences	kompetencje
constructivism	constructivisme	konstruktywizm
Dublin Descriptors	Descripteurs de Dublin	Deskryptory Dublińskie
European Commission	Comission Européenne	Komisja Europejska
evaluation	évaluation	ewaluacja
grounded theory	thèorie ancrée	teoria ugruntowana
IFLA – International Federation of Library Associations and Institutions	Fédération internationale d'associations de bibliothécaires et d'institutions	Międzynarodowa Federacja Stowarzyszeń i Instytucji Bibliotekarskich
information culture	culture informationnelle	kultura informacyjna
information literacy	maîtrise de l'information	edukacja informacyjna

- collaboration - curriculum - definition - documents - education - IFLA Section - instruction - logo - organisations - promotion - standards - terms in different languages - translation learning goals observations problem-based learning European Qualification Framework skills survey syllabus user studies Web 2.0	collaboration cursus définition documents éduaction section de l'IFLA formation des usagers logotype organisations vulgarisation standards termes en langues différentes traduction objectifs d'éducation observations apprentissage par problèmes Cadre européen des certifications competences enquête programme etudes des usagers Web 2.0	współpraca program nauczania definicja dokumenty edukacja sekcja IFLA szkolenie użytkowników logotyp organizacje promocja standardy teminy w różnych językach tłumaczenie cele edukacyjne obserwacje uczenie przez rozwiązywanie problemów Europejskie Ramy Kwalifikacji umiejętności badanie sylabus badania użytkowników Web 2.0

Index of authors