

TecCOMFrame: A Competence Framework for Technical Communication

Yvonne Cleary
University of Limerick
Yvonne.Cleary@ul.ie

Joyce Karreman
University of Twente
j.karreman@utwente.nl

Sissi Closs
Hochschule Karlsruhe
closs@ctopic.de

Zygmunt Drazek
Uniwersytet Szczeciński
drazek@wneiz.pl

Jan Engberg
Aarhus Universitet
je@cc.au.dk

Voichita Ghenghea
Universitatea Politehnica
Bucuresti
vghenghea@gmail.com

Birgitta Meex
KU Leuven
birgitta.meex@arts.kuleuven.be

Patricia Minacori
Université Paris Diderot
pminacori@eila.univ-paris-
diderot.fr

Julia Müller
tekomp
j.mueller@tekomp.de

Daniela Straub
tekomp
d.straub@tekomp.de

Abstract – *The role of technical communicators is expanding due to technology. However, many individuals throughout Europe gain employment as technical communicators without undergoing specialized training. TecCOMFrame, a three-year project funded by the European Union, aims to develop: 1) a common academic qualification and competence framework for technical communication; 2) prototypes of technical communication curricula; 3) a competence and qualification profiling tool and an update of the TecDocNet Guideline, which describes professional education and training of technical communicators in Europe. TecCOMFrame is coordinated by tekomp Europe and involves academic partners from eight European countries. The project started in September 2015. Partners have worked on the development of the qualification and competence framework, which was finalized and published at the beginning of 2017. Partners are now developing prototype curricula. Throughout the project, partners collect feedback from academics, practitioners and employers in technical communication to ensure that the project results meet the needs of all stakeholders. This paper discusses the background to the project and the process of developing the framework and curricula.*

Index Terms – *Europe, technical communication, competence, framework, curriculum.*

INTRODUCTION

In many European countries, technical communication does not have a prescribed academic curriculum because it is a relatively new field of work. While programs in technical communication have existed for many years in some European countries, academic development is limited in others. In some European countries, there are no academic programs in technical communication. By contrast, in Germany and Austria, where the academic field of technical communication has been strong for decades, over 40 academic programs are offered in technical communication or related fields, and programs are offered at undergraduate and postgraduate levels [1]. A recent report from Germany indicates, nevertheless, that the number of technical communication graduates is insufficient to meet labor market demands [2].

Many individuals throughout Europe, therefore, gain employment as technical communicators without undergoing specialized training. They may have training in domains such as software or engineering, and therefore have a good understanding of the technologies for which they develop content. However, they have no expertise in

the skills required of technical communicators. This lack of expertise is further compounded because, concurrently, the role of technical communicators is expanding due to technology. They may be involved in several activities, including: writing, information design, user experience, research, programming, web design, new media development, structured authoring, and myriad related tasks. As with other professionals working in digitized environments, the skillset is evolving continuously.

PROJECT BACKGROUND

Since 2003, tekomp, the German Association for Technical Communication, has worked to produce training tools and programs, and to identify the roles and competencies of technical communicators. These activities culminated in the publication of a comprehensive Cross-industry Competence Framework for Technical Communication. This cross-industry framework was designed for use by employees, companies, and in vocational training programs [3]. It does not have an academic focus.

Subsequent to that successful project, tekomp Europe, the European Association for Technical Communication, applied for European Union (EU) funding to launch a complementary project to develop an academic framework and academic curricula at various levels. The project received funding and in September 2015, TecCOMFrame (Technical Communication Competence Framework) was launched. The project will run for three years, from September 2015 to September 2018.

TecCOMFrame is coordinated by tekomp Europe and involves academic partners (the authors of this paper) from eight European countries: Belgium, Denmark, France, Germany, Ireland, Poland, Romania, and The Netherlands.

Some of these universities have offered programs in technical communication for many years, while others are working to establish programs in technical communication.

METHODOLOGY

I. Purpose and outputs

The project team is tasked with developing an academic framework and corresponding curricula in technical communication, at various levels.

The first stage of the project was the development of a competence framework to describe the competencies that are important in technical communication education. This competence framework was published in early 2017 [4]. The goal was to develop an inclusive and comprehensive framework, designed to include both core and peripheral competencies. It should also include feedback and

perspectives from the project partners, from research, and from stakeholders.

The second stage of the project, currently underway, is the development of a small number of prototypical curricula for higher education institutions. These curricula are derived from the competence framework and serve as exemplars for bachelor's and master's degrees in technical communication, and specialization courses/academic streams in technical communication for curricula in other disciplines (such as engineering or language studies). The curricula will be finished in spring 2018.

A further output of the project is a competence and qualification profiling tool. Again, this tool is derived from the competence framework. This tool is comparable to the profiling tool developed for the Cross-industry Competence Framework for Technical Communication [3]. It will have several target audiences, but primarily: technical communicators, who can use the tool to identify competencies they have, and those they need to acquire; and companies, which will be able to use the tool to express competencies they expect from technical communicators, and from higher education institutions.

Finally, the existing TecDocNet Guideline [5] will be updated, based on new data and insights gathered from the project. The TecDocNet Guideline describes professional education and training of technical communicators in Europe and was published in 2005. It also includes a general description of the professional field, and descriptions of the current state of the profession and of the challenges the profession faces.

Both the profiling tool and the updated TecDocNet Guideline will be published at the end of the project, in autumn 2018.

II. Collaboration strategies

The eight partners and the project coordinators meet regularly; face-to-face meetings are organized four times a year. During these meetings, the project administration and the progress in meeting milestones is discussed. Furthermore, plans are made regarding how to work on project outputs between meetings.

Web meetings are held as needed. These meetings are usually with the whole group, and their purpose is to provide updates between face-to-face meetings and to keep partners focused on the project. Occasionally, sub-groups of the project team have web meetings to work on tasks assigned to them.

The language used for meetings is English. Although this is the mother tongue of only one project partner, language has not been a barrier to communication. While cultural differences have not adversely affected the work of the group, there are differences in approaches to communication, decision making and consensus building, for example.

An important collaborative activity is dissemination of the project at conferences organized by tekcom and at other conferences related to technical communication. The feedback from conferences and other events is very valuable in helping to identify gaps in the content of the framework. Discussing the project at conferences and events also offers opportunities to meet other stakeholders in the project: e.g., other European institutions for higher education, and stakeholders from industry and service companies. These stakeholders can provide feedback on the framework, not only in person, but also through surveys.

A further collaborative feature of this project is the involvement of ‘silent partners’, individuals who have expressed interest in being involved, and who are invited to provide feedback on drafts of the framework. Silent partners include academics from Europe and the US, as well as practitioners and employers. Feedback from other academics enables the project team to acknowledge and incorporate the content and approaches of existing curricula. Feedback from practitioners and employers enables the team to understand which competencies industry and service companies consider most important for contemporary technical communicators, and also industry expectations for the future.

III. Project requirements

To ensure that they are usable and applicable to academic institutions throughout Europe, the competence framework, curricula, and other outputs need to adhere to several requirements.

The development process uses a *justifiable, comprehensible methodical procedure* involving empirical and iterative data gathering techniques. The content of the framework is presented systematically, and Bloom’s Taxonomy of Educational Objectives in the cognitive area [6] has been used to formulate the learning goals. Silent partners’ contributions have made the competence framework more robust.

The project team is aware of the *characteristics and demands of academic training*. The framework has to be focused on competencies related to a broad range of disciplines and in-depth knowledge and skills within specific subject areas. Since the field of technical communication changes rapidly, the framework also needs to be flexible and responsive rather than fixed, so that it can be used in creative, innovative ways to adapt to the role as it changes.

The third requirement is related: the framework needs to have the *potential to become a European-wide standard*. Therefore, the curricula derived from the framework must be consistent with current European concepts and tools, such as the levels defined in the European Qualifications Framework (EQF) [7].

All outputs from the project need to be *user friendly*; higher education institutions, students and professionals in technical communication, and in related fields, should be able to use the framework, prototype curricula, profiling tool and TecDocNet guideline effectively and efficiently.

RESULTS TO DATE

I. Iterative development of the framework

In April 2016, a first draft of the competence framework was presented at the European Academic Colloquium on Technical Communication in Berlin. This draft had 24 main subjects, each with a short description, sub-subjects, and learning goals. Following the presentation, participants (from universities throughout Europe) reflected on the content and offered suggestions (to individual partners and to the whole group) in an extended feedback session. The project team updated the framework based on this feedback, and in summer 2016, about 150 silent partners (about 100 from Germany and 50 from other countries) received a revised draft of the framework. During a project meeting in September 2016, their feedback was discussed as a quality assurance activity and the team decided how to integrate the suggestions. These activities led to the development of the final framework, which is now available [4].

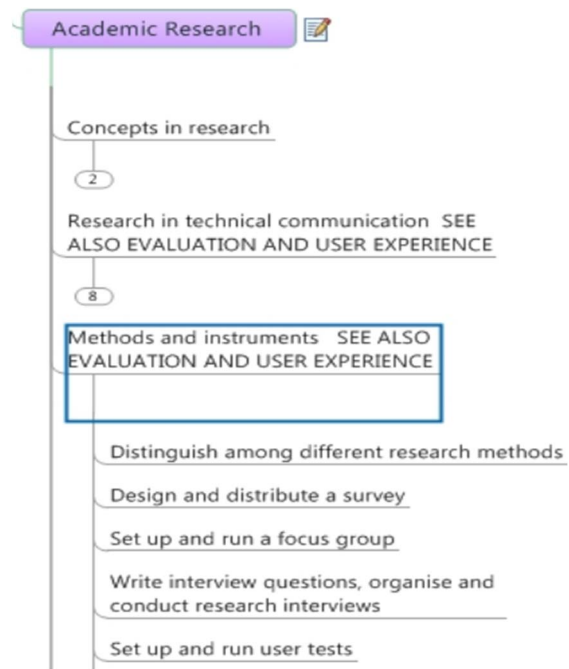


FIGURE 1. EXAMPLE OF THE COMPETENCE FRAMEWORK STRUCTURE.

The final framework has six major competence dimensions: Academic perspective; Communication and culture; Content; Management; Technology and media; and Transversal competencies. Each major dimension

incorporates several subjects and sub-subjects (up to ten), competencies for those sub-subjects, and learning goals associated with the sub-subjects. For example, one subject within Academic perspective is Academic research. That subject has several sub-subjects and associated competencies. Figure 1 shows some learning goals of the sub-subject Methods and instruments.

II. Prototype curricula

The framework now serves as the basis for the development of curricula. The partners are currently working in teams of two/three to develop prototype curricula for the following types of academic program:

- Bachelor's degree in technical communication.
- Consecutive master's degree (for students who have studied technical communication at bachelor's level).
- Non-consecutive master's degree (for students from any disciplinary background who have not studied technical communication).
- Subject stream in a master's degree in another field (e.g. language studies or engineering).

Since institutional and programmatic differences make it impossible and inappropriate to prescribe curricula and since different countries in Europe have different industrial profiles that may need to be accommodated in curriculum development, the purpose of the prototypes is to serve as examples and inspiration for institutions seeking to develop an academic program of study in technical communication. Partners using an agreed template, which includes details such as module title, credit weighting, subjects, and learning goals. These curricula will be finalized and published in 2018.

NEXT STEPS

In the last year of the project, the partners will publish final prototype curricula. Comparable to the design of the competence framework, curriculum development is iterative. Partners presented first drafts of prototype curricula in April, again at the European Academic Colloquium on Technical Communication. Feedback from that session will inform revisions over the next six months. Silent partners and other stakeholders will also have an opportunity to provide feedback on preliminary prototypes. In the interim, a competence and qualification profiling tool will be developed and the TecDocNet Guideline will be updated. Updates to the TecDocNet Guideline will be partly based on a survey distributed to technical communication practitioners throughout Europe.

The partners will disseminate the findings by presenting the project at appropriate venues and by publishing papers for academic and professional target

groups. Furthermore, all findings will be published on the project website: <http://www.teccom-frame.eu>.

ACKNOWLEDGEMENTS

This project is part-funded by the Erasmus + Programme of the European Union.

REFERENCES

- [1] tekcom (2015). "Die Hochschulübersicht der tekcom: Studiengänge der Hochschulen für Technische Kommunikation und fachverwandte Bereiche." [Online]. Available: www.tekom.de/fileadmin/Bilder/Beruf_und_Bildung/2015-12-17_tekom_Hochschuluebersicht.pdf.
- [2] D. Straub (2015). "Ergebnisse der tekcom-Frühjahrsumfrage: Branchen Kennzahlen für die Technische Dokumentation 2015." [Online]. Available: http://www.tekom.de/fileadmin/Dokumente/de/tekcom_2015_07_08_Branchenkennzahlen_2015_DE.pdf
- [3] tekcom (n.d.). "Cross-industry competence framework for technical communication." [Online]. Available: <http://competencies.technical-communication.org/>
- [4] tekcom Europe (2017). "Academic competence framework for technical communication." [Online]. Available: <http://www.teccom-frame.eu/competenceframework/>.
- [5] TCEurope (2005). "Professional education and training of technical communicators in Europe: Guidelines." [Online]. Available: <http://www.comtec-ct.org/images/PDF/tecdoc.pdf>.
- [6] B. S. Bloom *et al.*, *Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook I: Cognitive Domain*. New York: David McKay, 1956.
- [7] European Commission (2016). "Descriptors defining levels in the European Qualifications Framework." [Online]. Available: <https://ec.europa.eu/ploteus/en/content/descriptors-page>.

ABOUT THE AUTHORS

Yvonne Cleary is a lecturer in Technical Communication and Instructional Design, and Program Director for the MA in Technical Communication and E-Learning at the University of Limerick, Ireland. She holds an MA and a PhD in technical communication. Her research interests include professional issues in technical communication, technical communication pedagogy, virtual teams, and international technical communication. She has presented her work at conferences in Europe and the United States and has published in leading journals in the technical communication field.

Joyce Karreman is an assistant professor of Technical Communication at the University of Twente, the Netherlands. She received her PhD in technical communication from this university. Her research interests include the design of instructive documents, user-centered design, and intercultural issues related to usability and user experience. She has presented her work at international conferences on technical and professional communication and has published in several journals.