

A Multi-layered Discourse Community: Defining Biotechnology and Environmental Engineering Discourse Communities at SUT

Issra Pramoolsook*

School of English, Institute of Social Technology, Suranaree University of Technology

Abstract

The concept of discourse community plays a significant role in genre study research. Understanding it thoroughly will result in a clearer and more insightful perception about genre creation and utilization in that particular discourse community. In this analytical review article, the concept is discussed in order that in the future it can be a basis for a genre analysis study on dissertations and research articles, the two key genres for postgraduate students nowadays. After a summary of the criteria for identifying a discourse community, two disciplinary groups at Suranaree University of Technology-Biotechnology and Environmental Engineering-are used as examples to confirm their status as two different discourse communities. The discussion describes how these two disciplines operate within a multi-layered discourse community inside and outside the university context with different interactions from one layer to another. To conclude, the discussion leads to a benefit that a good understanding about the concept yields in genre analyses of dissertations and research articles and the study of genre transfer.

*Keywords: genre (ประเภทการสื่อสาร); discourse community (กลุ่มผู้ใช้สัมพันธ์สารเดียวกัน);
disciplinary discourse (สัมพันธ์สารจำเพาะแขนงวิชา)*

* Corresponding author.

E-mail address: issra@sut.ac.th.

บทคัดย่อ

แนวคิดเรื่องกลุ่มผู้ใช้สัมพันธ์สารเดียวกันมีบทบาทสำคัญในการวิจัยและศึกษาเรื่องประเภทการสื่อสาร ความเข้าใจอันต้องแท้เกี่ยวกับแนวคิดนี้จะช่วยสร้างความเข้าใจอันชัดเจนและลุ่มลึกมากขึ้นในเรื่องการสร้างและการใช้ประเภทการสื่อสารต่าง ๆ ในกลุ่มผู้ใช้สัมพันธ์สารเดียวกันหนึ่ง ๆ บทความนี้วิพากษ์วิจารณ์ถึงแนวคิดเรื่องกลุ่มผู้ใช้สัมพันธ์สารเดียวกัน เพื่อให้เป็นพื้นฐาน ไปสู่การวิเคราะห์ประเภทการสื่อสารจำพวกวิทยานิพนธ์และบทความทางวิชาการ ซึ่งนับว่าเป็นประเภทการสื่อสารสองชนิดหลักสำหรับนักศึกษาระดับบัณฑิตศึกษาในปัจจุบัน หลังจากบทนำเพื่อสรุปหลักเกณฑ์ที่ใช้ในการระบุว่ากลุ่มใดเป็นกลุ่มผู้ใช้สัมพันธ์สารเดียวกัน จะมีการยกตัวอย่างสองสาขาวิชาที่มหาวิทยาลัยเทคโนโลยีสุรนารี ได้แก่ สาขาวิชาเทคโนโลยีชีวภาพ และวิศวกรรมสิ่งแวดล้อมเพื่อยืนยันให้เห็นว่าทั้งสองสาขาวิชาเป็นกลุ่มผู้ใช้สัมพันธ์สารเดียวกัน นอกจากนี้ยังมีกรชี้ให้เห็นอีกด้วยว่าทั้งสองสาขาวิชาจริง ๆ แล้วดำเนินการภายใต้กลุ่มผู้ใช้สัมพันธ์สารเดียวกันในหลายระดับ ทั้งในและนอกบริบทของมหาวิทยาลัย ซึ่งแต่ละระดับก็ต้องการปฏิสัมพันธ์ที่แตกต่างกันออกไปในตอนท้าย บทความนี้ชี้ให้เห็นถึงประโยชน์ของความเข้าใจอันต้องแท้เกี่ยวกับแนวคิดเรื่องกลุ่มผู้ใช้สัมพันธ์สารเดียวกันในการวิเคราะห์ประเภทการสื่อสารจำพวกวิทยานิพนธ์และบทความทางวิชาการ และการศึกษาเรื่องการถ่ายโอนระหว่างประเภทการสื่อสาร

Introduction

The discussion will start with the concept of discourse community, since in it genres are created and employed as a means of communication, maintenance and extension of its knowledge and initiation of new members into the community. Discourse communities are socio-rhetorical contexts that form in order to work collaboratively towards sets of common goals (Swales, 1990). This concept developed from the concepts of speech community and interpretive community, and is located somewhat between these two (Borg, 2003). Unlike a speech community, membership of a discourse community is usually a matter of choice, and unlike an interpretive community, members of a discourse community actively share goals and communicate through discourse with other members to pursue those goals. In a discourse community, language is used in discourse as a form of social behavior and it is the communicative purposes shared and acknowledged among its members that drive its language activities. These purposes serve as the prototypical criteria for genre creation and identity, and also operate as indicators of conventional characteristics included in a genre. Genres them-

selves are classes of communicative events which typically possess features of stability, name of recognition, and so on. An established member of any discourse community possesses characteristics that can associate him/herself to the discourse community. One of the characteristics is familiarity with the particular genres that are used to communicate among members in various events to achieve those sets of goals. As a result, genres are the communicative properties of the discourse community. In other words, genres belong to discourse communities, not to individuals.

Swales (1990: 24-27) summarizes six defining characteristics that are necessary and sufficient for identifying a group of individuals as a discourse community.

1. A discourse community has a broadly agreed set of common public goals.
2. A discourse community has mechanisms of intercommunication among its members.
3. A discourse community uses its participatory mechanisms primarily to provide information and feedback.
4. A discourse community utilizes and hence possesses one or more genres in the communicative furtherance of its aims.
5. In addition to owning genres, a discourse community acquires some specific lexis.
6. A discourse community has a threshold level of members with a suitable degree of relevant content and discursal expertise.

For the second characteristic, a discourse community has developed discursal expectations involving the form, the function, the position of discourse elements, and the roles texts play in the operation of the discourse community as the mechanisms of intercommunication among its members. These discursal expectations are created by the genres that sustain the operation of the discourse community. Therefore, study of genres present in a discourse community can potentially shed light on the various aspects of its operation, maintenance, and extension.

A Multi-layered Discourse Community at Suranaree University of Technology

As central in genre studies of dissertations and research articles which are the two key genres for postgraduate students nowadays, the concept of discourse community deserves elaboration in relation to the context of Suranaree University of Technology (SUT). The two genres in focus are produced in a university, which can be conceptualized as a single large community that contains a collection of departments that have their own disciplinary cultures and community lives (Swales and Feak, 2000). In the particular community of SUT, there are layers of sub-communities from the Institute level (e.g. Institute of Agricultural Technology and Institute of Engineering) to the School level (e.g. School of Biotechnology and School of Environmental Engineering). While each School has its own disciplinary cultures and community lives, a group of related Schools collectively represent the disciplinary cultures and lives typical of their parent Institute. Another possible layer of sub-community in this context is the level of research interest group embedded in each School. This microcommunity consists of supervisors, researchers, and students that share their interests in the same specific research topic. Naturally, the different topics that they are engaged in would result in differences in some aspects (such as research methods and lexis for the research topic) from other groups in the same School.

All across the community of SUT, a number of genres are produced and used for operational and pedagogical purposes. The university has developed its own discursal expectations involving the form, the function, and the roles texts play in its operation and teaching and learning. These expectations govern genre creation and employment in all sub-communities constituting SUT. Furthermore, each layer of sub-communities operating in the discourse community of SUT also has its own discursal expectations that their members have to consider when producing a text. These layers of discursal expectations impose guidelines for genre construction at the different levels. To provide a clearer picture of a multi-layered discourse community, writing a dissertation can be a good example.

The outermost layer is the university level. SUT's Academic Support Division has issued guidelines for dissertation writing including its format, structure, and content, that all postgraduate students from any School have to comply with. However, while the guidelines should be observed, variations in terms of structure are also allowed within reasonable limits. The second layer is the Institute level, where the Institute Committee has a role in acknowledging the dissertation topics and passing successful dissertations to the university for granting the degree. The committee, however, can comment on the structure and quality of the dissertation and request the School to reconsider it. The next layer is the departmental or School level. The School committee oversees every aspect of the postgraduate programmes including teaching and learning, facilities, students' welfare, as well as research projects and dissertations and theses. The research topics proposed by the students have to be approved, the supervisors and examiners appointed, their progress checked, and their dissertations approved by the School committee. This is a critical level since the School has to negotiate with both the university's guidelines and the disciplinary culture and practices in order to produce a successful dissertation. Different disciplinary cultures can have different conventions for structuring the dissertations. Evidence of these differences in the structure of the dissertations between the two disciplines is found in a research work on writing dissertations at SUT (Pramoolsook, 2007). The innermost layer is at research interest group level, where the topics chosen, the research methodologies, and the advisor-advisee relationship are factors influencing the writing of dissertation. Thus, the dissertation structure can vary even within and across the same disciplinary culture or School. Evidence of the extent of the variations among the dissertations produced within Biotechnology and Environmental Engineering is also found (Pramoolsook, 2007).

Two Academic Disciplines, Two Separate Discourse Communities

The roles and relationship of SUT and its sub-communities above correspond with the several layers of shaping context that variously impinge on the construction of an exemplar of the dissertation genre in the US (Swales, 2004). In this paper, the Schools of Biotechnology and Environmental Engineering are regarded as two sub-communities in the

community of SUT. As properties of the discourse community, genres are formed and constructed to achieve the specific communicative goals mutually shared in the discourse community. To provide a confirmation that the two Schools stand as two separate discourse communities under the same university, the six criterial characteristics to define a discourse community by Swales (1990) will be interpreted to explain these communities. Because genres are intimately linked to a discipline's methodology, they are constructed in ways that conform to the discipline's norms, values, and ideology (Berkenkotter and Huckin, 1993). This confirmation aims to point out that genres produced in each of these Schools should be governed by the disciplinary cultures and lives of the discourse community they belong to. According to Ramanathan and Kaplan (2000: 176), Swales' criteria are valuable especially if the term '*discourse community*' is taken to refer to particular academic disciplines, as they allow one to begin to conceptualize what they call '*disciplinary discourse communities*' as sub-cultures that have relatively systemic, albeit generally implicit, rules regarding membership, goals, participation, and patterns of communication.

Regarding the first characteristic that discourse communities have common goals, meaningful and structurally stable texts emerge from communities that are held together by shared goals and values. Apart from creating new knowledge, one general goal of the Biotechnology and Environmental Engineering disciplines is to produce competent biotechnologists and environmental engineers, and researchers in the fields. To address this need and to achieve this goal, a number of texts that are constructed by speakers and writers in the discourse communities for this specific purpose arise. This leads to the second and third characteristics, that a discourse community has mechanisms for intercommunication between its members and that it uses participatory mechanisms to provide information and feedback. The inter communication mechanisms for the members of Biotechnology and Environmental Engineering communities at SUT in the process to achieve the said goal come in various forms or genres. They include, as mentioned by the discourse community members themselves in a questionnaire survey on the writing requirements by their discourse community (Pramoolsook, 2007), pedagogical genres such as lectures, lab reports, presentations, examination papers, and dissertations, which are

created for intercommunication and evaluated with feedback given. These texts are necessary for the introduction and acculturation of the students and for training them to achieve the goals of the community, representing a wide range of genres used to communicate and achieve its aims. This corresponds with the fourth characteristic of a discourse community. Among these pedagogical genres produced during the course of attaining a Master's degree, the dissertation is the ultimate and most valued genre produced as proof of the students' successful completion of the degree. In other words, a complete dissertation indicates the successful enculturation to the disciplinary discourse community of a student through acceptance of the expert members of the community.

The fifth characteristic, that each discourse community develops its own lexis, is also found true in the disciplinary discourse communities of Biotechnology and Environmental Engineering. Members and authors of a discourse community, who become insiders of the community through initiation into and participation in that community, evolve a selective lexis, namely; modes of communication, acronyms, jargons, and textual forms, that facilitate communication among peers. Apart from a range of specific terms assigned to texts used in their teaching and learning process, the members of the two communities also employ a specific lexis in their knowledge enquiry that means very little to an outsider. The titles of some dissertations and research articles provide good examples. While highly technical terms such as *nitrogen-fixing cyanobacteria*, *anaerobic composting*, and *batch loading* are totally unfamiliar to the outsiders, terms such as *morphology* in Biotechnology have a different concept to that used in linguistics. Moreover, everyday terms such as *culture* acquire specialized meanings as they become part of the Biotechnology discourse community.

Finally, there are a number of members involved in the activities of these communities to achieve the shared goals. These members consist of people in different statuses and roles, and naturally with different degrees of relevant content and discursal expertise, which corresponds with the sixth characteristic. In each of the communities, it is the lecturers and researchers who are regarded as the experts with more content knowledge and higher discursal expertise due to their experience of using and composing genres.

At SUT, researchers normally hold at least a Master's degree and are hired by the lecturers to assist them with their research projects. Sometimes, they are assigned to help the students with the experiments such as preparing the materials and the apparatus. Some researchers are also asked to read and grade written works such as lab reports and exam papers due to their higher content and discursal expertise than that of the students. For new members, learning generic, socially preferred discourse structure is a crucial aspect of the entry into discourse community (Coe, 1994). Through initiation and acculturation processes to the disciplinary community, the new members are expected to gain the community's knowledge and discursal competence to the acceptable level. According to Hyland (2006), students are seen as peripheral and perhaps temporary members of a disciplinary community, and they must adopt the discourse practices of their professors to be accepted. Their academic accomplishments are seen to depend partly on their ability to reproduce particular discourse forms and their control of the genres valued by their community. This kind of relationship yields authority to the expert members in the discourse community (Johns, 1997). The faculty members expect the students to accept the texts, roles, and contexts of the disciplines and they need to understand basic conventions, concepts, and values of the community's genres.

The six criterial characteristics above help confirm that Biotechnology and Environmental Engineering Schools are two disciplinary discourse communities embedded in the larger discourse community of SUT, similar to what Tomlinson terms '*campus discourse community*' (1990). They also point out that each discourse community, its members, and its genres co-produce and mutually sustain the stability of each other. Pare and Smart (1994: 146) suggest that genres can be seen as a way to ensure the production of what could be called '*community-based discourse*', a discourse whose meaning is created by and for the collective group of community members.

Swales (1998: 203), after a textography or a site study of three text-communities associations in a university building, proposes the concept of '*place discourse community*' whose working definition seems to be able to capture the true situation of the two target discourse communities. According to this definition, a place discourse community (PDC) is a group of people

who typically have a name and regularly work together with a shared sense of their aggregation's roles, purposes and concerns. To channel, develop, and monitor those roles and purposes, it has, during its existence, evolved a range of spoken, spoken-written, and written genres with self-evident discursal and rhetorical characteristics. These genres are seen as an interactive system or network that validates the community's activities outside its own sphere. Moreover, for its communication, a PDC has developed some specific lexis and evolved a specific set of values as criteria for what is considered good or less good work. Importantly, it tries to communicate its traditions and modes of operation to its newcomers through legitimate peripheral participation in order to impart and educate them with appropriate discursal practices.

Swales (1998) further uses the definition above to validate the place discourse community status of the three communities in his investigation. While the Computing Resource Site fails to qualify for the PDC status for some reasons such as limited internal documents produced on site, the qualification of the other two academic departments - the Herbarium and the English Language Institute - is more certain. One of the reasons is the existence of the theory-practice genres that sustain community life. This PDC definition helps further support the confirmation of the Biotechnology and Environmental Engineering Schools as two separate place discourse communities because they both, like the two in Swales (1998), possess a number of operational and pedagogical genres to sustain their disciplinary operation and lives.

'Local' vs. 'Global' Discourse Communities

As communities may be hybrid, characterized by a heterogeneous set of values and discourses, one community may not be separated from another according to its unique values (Canagarajah, 2002). Obviously, these two disciplinary discourse communities and their parent university do not stand as isolated entities producing graduates and academic knowledge locally. In pursuit of a wider recognition of their academic and professional merit, they have to subscribe to a wider and larger discourse community, whose values, purposes, and discursal practices they have to share. Since it is acknowledged that a member of a discourse community can enjoy mem-

bership in multiple communities simultaneously, they have to hold varied set of values and ideologies according to the communities they affiliate with (Raforth, 1990; Johns, 1997; Swales, 1998). The members of the Biotechnology and Environmental Engineering Schools at SUT can extend their membership beyond their immediate location to other discourse communities at the national or international levels.

These two levels of discourse communities are conceptualized by Killingsworth and Gilbertson (1992, cited in Swales, 1998) who propose the distinction between the 'local' and 'global' discourse communities. While a *local discourse community* consists of readers and writers who habitually work together in colleges, departments, government agencies or other groups defined by specific demographic features, a *global discourse community* is a group of writers and readers defined exclusively by a commitment to particular kinds of action and discourse, regardless of where and with whom they work. According to this distinction, the place discourse communities of Biotechnology and Environmental Engineering Schools can be perceived as two local discourse communities, whose members aspire to affiliate to the global communities of biotechnologists and environmental engineers at large to gain recognition. These global discourse communities of which they want to be acknowledged as members have a different set of aims and purposes, which is said to encourage knowledge creation and development in the field through actively disseminating and circulating research findings among their members. These global communities have their own ways of operation, values, and discursal conventions that all members have to share, and new members be inducted to.

For SUT's Biotechnology and Environmental Engineering members to comply with the expectations of another discourse community, they have to negotiate the existing practices with those of the new community that they aspire to subscribe to, which can be said to come as *a cost of affiliation* (Johns, 1997). For example, while the dissertation is composed and used for a particular communicative purpose in a place or local discourse community of an academic discipline, it has to be altered in order to fit the new discourse conventions of the global discourse community to be accepted for communication among the members, which can be in the research article form. One

common way of alteration is to change the dissertation into research article, which is a channel for introducing good students to the global discourse community. The transferring from the dissertation into research article is thus considered as a negotiation between the existing discursive conventions of a place discourse community and the new ones of the wider community.

For this present review, the Schools of Biotechnology and Environmental Engineering are confirmed as two distinct place discourse communities or disciplinary cultures operating to achieve their goals in a campus discourse community of SUT. The members in these two communities also subscribe to wider local and global communities of those interested in Biotechnology and Environmental Engineering, whose goals and purposes are different. Killingsworth and Gilbertson's (1992) distinction between the local and global discourse communities is likely to fit most with the situations here. As for their discourse practices, it is found that a range of genres are produced and employed for communication in the local discourse community, one of which is dissertations that are written by graduate students as an ultimate product for the completion of a degree. To communicate the research in the dissertations to the global discourse communities, one popular channel is to translate the dissertation into another genre which is research articles to be published in journals which are in circulation among interested members. In this global discourse community, peer review of articles submitted to journals is a forum where representatives of the discourse community validate one another's work. The validation is an important part of the development and functioning of the scholarly discourse community.

Conclusion

Although '*discourse community*' is considered a problematic and fuzzy concept to define and there is no clear agreement on where to actually locate discourse communities or where to draw their boundaries (Swales, 1990; 1998; Ramanathan and Kaplan, 2000; Hyland, 2006), an attempt to make a distinction between the local and global discourse communities is worth making here in this paper. The distinction aims to provide a foundation for research in genre transfer, since it is an investigation of two genres produced in two different but overlapping discourse communities from two academic disciplines. In total, these four discourse communities each have their own

discourse and rhetorical conventions imposed on the genres used for communication. Thus, the investigation on the differences made to the dissertations in order to translate them into research articles will also shed light on the effects of transferring one genre in one discourse community into another genre in another discourse community. For example, the genre transfer for a different discourse community in this case sees the change of the roles of people involved in producing a dissertation. The authority the supervisors have over the students when writing a dissertation disappears when they both have to collaborate in changing it into a research article. Together, they encounter a new audience which is anonymous reviewers of manuscripts for journal, whose authority as '*expert gatekeepers*' (Tomlinson, 1990) they have to implore first, and then the unknown wider audience of the successful article. Differences caused by different audiences from different discourse communities are expected to be found in the analysis of a genre transfer study.

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