UNDERSTANDING FACULTY DEVELOPMENT: A
QUALITATIVE TYPOLOGY OF SERVICES AND PURPOSES


A MASTER'S THESIS

BY

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THE PROGRAM OF CURRICULUM AND INSTRUCTION
İHSAN DOĞRAMACI BILKENT UNIVERSITY
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To my dearest mother…

UNDERSTANDING FACULTY DEVELOPMENT: A QUALITATIVE

TYPOLOGY OF SERVICES AND PURPOSES

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Understanding Faculty Development: A Qualitative Typology of Services and

Purposes

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I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum and Instruction.

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ABSTRACT

UNDERSTANDING FACULTY DEVELOPMENT: A QUALITATIVE
TYPOLOGY OF SERVICES AND PURPOSES

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January 2017

 The concept of faculty development, or teaching-learning centers, has been gaining importance around the world since late 1950s in the context of higher education. Their services and offerings have been changing in theory and implementation in time due to the changing needs and demands in higher education. Despite the fact that teaching and learning center initiatives and proposed models of faculty development have been researched for many years, the concept of faculty development is relatively new within the context of Turkey, and its practice is limited. However, there is a lot to learn from the experiences of the universities which have been implementing such programs for years. The purpose of this study is to explore the services offered by faculty development centers through the cross-case analysis of their web sites by using Lee's (2010) categorization of services and Robertson's classifications of faculty development missions as lenses. The researcher used cross-case analysis to explore the web sites of teaching-learning centers of the top twenty-eight universities according to the US World News and Rankings in 2016 so as to determine the main services, sub-services, duration, target audiences as well as the purposes of main services. The results yielded to the development of the typological classification of the purposes. Findings provide insights to the practices of the best universities and therefore enable a model for future developers in Turkey.

Key words: faculty, faculty development, cross-case analysis

ÖZET

ÖĞRETİM ÜYESİ GELİŞİMİNİ ANLAMAK: HİZMET VE AMAÇLARIN NİTEL BİR TİPOLOJİSİ

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Öğretim üyesi gelişimi veya öğretme-öğrenme merkezleri kavramları yüksek öğretim bağlamında 1950'li yılların sonlarından beri tüm dünyada önem kazanmaktadır. Sunmuş oldukları hizmetler de teori ve uygulama anlamında yüksek öğretimdeki değişen talep ve ihtiyaçlar doğrultusunda zaman içinde değişim göstermiştir. Öğretme-öğrenme merkezleri girişimleri ve önerilen öğretim üyesi yetiştirme programları tüm dünyada yıllardır araştırma konusu olsalar da, Türkiye'de nispeten yeni kavramlardır ve kullanım alanları kısıtlıdır. Buna rağmen bu tür programları yıllardır uygulamakta olan üniversitelerin deneyimlerinden öğrenilecek çok şey vardır. Bu çalışmanın amacı öğretim üyesi yetiştirme programları tarafından sunulan hizmetlerin, kendi web siteleri üzerinden çapraz durum incelemesi yapılarak ve Lee'nin hizmet sınıflandırması ve Robertson akademisyen geliştirme misyonlarını baz alarak incelemektir. Araştırmacı US World News and Rankings' in 2016 verilerine göre dünyanın en iyi yirmi sekiz üniversitesinin öğretme-öğrenme merkezlerinin internet sitelerini incelemiş böylelikle ana ve alt hizmetleri, süreleri, hedeflenen kitleyi ve her bir ana hizmetin amacını ortaya koymayı hedeflemiştir. Sonuçlar hedeflerin tipolojik sınıflandırılmasının gelişimini de mümkün kılmıştır. Bulgular en iyi üniversitelerin uygulamaları hakkında bilgi sunmakta ve dolayısıyla da Türkiye'deki program geliştiriciler için bir model ortaya koymaktadır.

Anahtar Kelimeler: akademisyen, akademisyen gelişimi, çapraz durum çalışması

ACKNOWLEDGEMENTS

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CHAPTER 1: INTRODUCTION

Introduction

The subject of faculty development has been gaining importance for the last two centuries and it has various definitions and aims in the context of higher education. Sometimes educational development and faculty development can be used interchangeably by educational researchers; especially educational development is preferred in European context (Ouellet, 2010). Both terms encompass the same topics such as initiatives for academic development, staff development, and quality enhancement (Ouellet, 2010).

This chapter provides background information about adult education, faculty development, what this term truly encompasses, teaching-learning centers and their web sites as well as the common services offered on these web sites. Then it proceeds with the problem, the purpose of the study, research questions, significance as well as the definitions of the key words.

Background

Andragogy as an adult learning theory

Since the 1920s, the belief that adults have specific learning needs that are different from children's has been gaining dominance (Knowles, 1970). *Andragogy* as an adult learning theory was introduced by Knowles in the 1970s and he defined it as "the art and science of helping adults learn, in contrast to pedagogy as the art and science of teaching children" (Knowles, 1970, p.43). According to this theory, adult learning depends on four critical assumptions: 1. Adults become more self-directed as they

get mature, 2. As people grow, their experiences start to become rich resources for their future learning process 3. Their readiness to learn becomes more instrumental and more related to their social roles, which means they want to learn things that they will benefit in the future, 4. Their time perspective becomes more immediacy of application, which means they do not postpone what they need to learn (Knowles, 1970, p. 44 - 45). In other words, adult learners are self-directed and self-oriented learners who are well aware of what they need to learn and who can reflect on their learning process. Teaching-learning centers and their web sites stand as platforms where faculty members, instructors or teaching assistants can consult on any topic they feel a need to learn more about. Thus, they are the places in which self-directed or autonomous learning is encouraged.

Self-directed learning

Candy (2004) states that for self-directed learning, "whatever the stimulus to learning, the locus of initiative and control lies with the individual learner" (p.45). This view is in parallel with andragogy in that they both favor autonomous learner who can take the control of their learning processes. In addition, as learning is seen as a continuous process, lifelong learning is a focus area of self-directed learning. It means that people feel the need to learn different things depending on their needs and changing social roles in time.

Information and communication technologies (ICT) and self-directed learning
Candy (2004) claims that ICT and self-directed learning have a reciprocal relationship due to two main reasons: The first reason is that learners has the capacity to access a virtually unlimited range of information related to their needs and

interests and to contact with their peers around the world easily. The second reason is about for those who are designing, manufacturing or distributing hardware and software; they have the chance to distribute their offerings easily to people and further elaborate and develop their offerings and services. In addition, Candy (2004) proposes that self-directed learning has increased with the rapid spread of digital technologies. Ever since the people have easy access to the information store they need, it is true to assume that they become more self-centered and autonomous learners. For instance, self-study resources offered by development centers are great examples of such increase.

Another point is that although online learning is assumed to have some disadvantages such as decontextualizing knowledge and making people anti-socials (Candy, 2004), it also has some certain advantages in terms of self-directed learning. For instance, people can contact with other learners easily and quickly through mail groups, discussion groups or live chat rooms. Some development centers provide such services through their web site. An online platform called EDEN (Educational Doctorate EDU Network) provided by Imperial College London for members of college staff interested or engaged in doctoral-level study in education is an example of such services promoting self-directed learning.

Self-directed learners have also impacts on ICT as well. Candy (2004) states that specific devices and software have been developed for particular learner groups. Self-directed learners reach such resources through many ways, either by discovering by themselves or being introduced by others; and their needs and demands shape the creation of domain-specific software and applications (Candy 2004). Thus, the

common needs and interests of faculty members result in the creation of teaching-learning centers with certain missions and the delivery of services through the most preferable ways; either online or physically.

Faculty development

Faculty development is a term which is associated with rather classroom-based, individualized endeavor (Francis, 1975) in the 1970s. Similarly, Ralph (1973) defines faculty development as practices in which faculty can learn to function more effectively with minimum stress and tension. However, this individualized view of faculty development has shifted towards a more integrated approach over years. Lewis (1996) claims that faculty development has evolved into a broader term that emphasizes three key areas of effort: personal development (self-reflection, vitality and growth), instructional and pedagogical development (course and student-based efforts) and organizational development (program, department and institution-wide practices) (as cited in Ouellet, 2010). Robertson (2010) adds curriculum development as another key area for further improvement, which covers facilitation of "instructional design (integrated learning goals, activities, and assessment) in the contexts of course units up to whole programs such as general education or degree programs" (p.38).

Faculty development initiatives can be put into practice through various ways. Robertson (2010) believes that a carefully planned educational improvement program should be planned and that a broad constituent base for the program should be built. There are several faculty development programs built by universities and most of them have centers to facilitate these programs. Cook and Marincovich (2010)

state that research universities are the first to establish development centers. For instance, the first educational development center was the Center for Research on Learning and Teaching (CRLT) at the University of Michigan which was founded in 1962. Similarly, Stanford's Center for Teaching and Learning (CTL) was established in 1975 (Cook & Marincovich, 2010).

Development centers can provide various services for various target audience to reach teaching and learning excellence with clearly determined mission(s). Robertson (2010) classifies these main missions of a faculty development center as instructional development, curriculum development, faculty development and organizational development. The researcher uses them as lenses to analyze the offerings of teaching-learning centers.

There are also various key factors that faculty developers should take into account. The use of instructional technology, the budget, staff, the organizational structure of the center, the characteristics of an ideal center director, the services to offer, the ways to deliver these services, ethical guidelines for educational developers, the advisory board and creating the brand (Robertson, 2010). All these areas should be carefully discussed to determine the features of a development center.

Faculty development center web sites

In the 21st century, technology is surely one of the most effective ways to determine the functioning of a development center. It is a significant element considering the ways to deliver centers' services to the audience and turning the center into a brand. Robertson (2010) divides the methods of delivery in two fundamental ways:

centripetally and centrifugally. Centripetally refers bringing in audience physically (for example, to workshops) and electronically (to the web site) whereas centrifugally means going out to clients, physically (for example, making house calls) and electronically (for example, through Podcasting) (Robertson, 2010). The developers can decide to create a website which informs people about their centers and its offerings; or they may offer some services through these web sites. Kuhlenschmidt (2010) states that the center web site functions as an important source of just-in-time information for busy professionals if it is organized using faculty rather than developer language. She also claims that a center web site is an important representation of the center as well as the values it holds (Kuhlenschmidt, 2010). Thus, it can be said that the mission statement, offerings and services mentioned on a center web site reflect the aims and purposes of the center and the institution.

Several researchers explain what a development center web site should offer. According to Kuhlenschmidt (2010), a development center web site should have search engines for finding information easily and each web site needs specific title to its particular content. In addition, she states that newsletters can save money and it is useful for tracking recipient. There are some ways to offer interactive teaching and learning activities. For example, podcasting and streaming video seminars which is presented with a blog can be a good example of active learning as well as events registration and online survey tools (Kuhlenschmidt, 2010). She proposes that if the center has the budget, it can even offer pre-packaged online development services. Kuhlenschmidt (2010) also mentions the staff communication through the web site. She offers that a space which is accessible only to staff or everyone can be created for common center documents (such as consultation templates or seminar planning

materials). Another researcher, Tarr (2010) proposes that web page of the development centers can offer online programs which can be very beneficial for faculty, students or anyone who have difficulty attending face-to-face sessions. This kind of a service can provide basic information, tutorials that lead faculty through a presentation of relevant topics, or online discussion forums that provide networking opportunities (Tarr, 2010). Another advantage of a center web site is easy marketing opportunity for the ongoing teaching and learning activities or professional development opportunities (Tarr, 2010). A development center web site can provide information about its practices, advertise itself and can reach more people, which are categorized as "consultation" by the researcher.

Common services

There is a wide range of service options that can be offered by development centers. Some of them are offered only via web site and some of them are introduced on the web site but actually served physically in the center. Lee (2010) states that the earliest forms of service and the most commonly offered services by the centers are workshops, individual consultations, classroom observations, orientations, grants, faculty fellows, teaching circles, faculty learning communities (FCLs), management of grant-funded projects and engagement in national projects. Lee (2010) also adds that some of the centers "…assemble resources on teaching such as a library of books and publications on teaching and learning in higher education; produce their own newsletters with helpful articles; and develop Web sites, sometimes with links to other teaching resources" (p.29). Robertson (2010) states that a faculty development center should offer the following services: events such as workshops or special speakers, programs such as peer - led communities of practice or innovative

teaching grants, consultations and process facilitations, such as retreats focused on, for example, the accreditation process or a department meeting in which learning outcomes for a major are discussed.

Ellis and Ortquist-Ahrens (2010) propose some options for programs and activities for faculty development programs. They categorize these activities under two categories: One-time events and ongoing programming. One-time events include workshops, institutes and academies, symposia and conferences, open classroom events whereas ongoing programming encompasses book clubs or discussion groups, teaching circles, communities of practice and faculty learning committees, programs for new faculty, certificate programs, mentoring and consultations, web sites and grants. The works of these researchers indicate that the most commonly offered services are workshops, consultation, faculty learning communities, orientations and programs for new faculty. The results of data analysis also prove these claims, which can be seen in Chapter 4.

Problem

Faculty development is a set of practices aiming at the improvement of faculty members on a wide range of areas; from teaching and learning practices to professional and academic development. In the U.S.A, many institutions have practiced development services for their faculty since early 1950s, although the focus of development has changed from scholarly-base to a more integrated view including curricular, organizational, instructional and faculty development (Ouellet, 2010). Many researchers have analyzed different aspects of faculty development. Erickson (1986) analyzed the current faculty development practices whereas Bergquist and

Phillips (1975)'s study on the components of an effective faculty development program is still serve as a guideline for many educational researchers who are interested in faculty development. However, there is a need to highlight other aspects of development such as organizational, curricular or faculty regarding management and leadership skills.

In Turkey, universities usually provide limited development opportunities but one of the universities in particular makes explicit online statements about the program, and its teaching and learning activities. In addition, there is limited research regarding the need of faculty development for research assistants in Turkey. Odabaşı (2005) states that Turkey needs more and more faculty development practices and faculty development services should be available to all faculty, regardless of the academic rank. In another study, Kabakçı and Odabaşı (2008) state that, based on their research results, the research assistants in education faculties in Turkey need support in terms of professional development, institutional development, instructional development and personal development. Due to the lack of studies and implementations regarding to faculty development in Turkey, this study aims to explore the most commonly offered main services by teaching-learning centers through the content analysis of center web sites so as to offer a platform for future faculty development center implementations in Turkey.

Purpose

There has been increasing emphasis on faculty development programs intending to maximize the impact of faculty in terms of research, teaching and service for achieving institutional and personal goals (Schaefer & Utschig, 2008). The concept

of faculty development is relatively new within the context of Turkey, and its practice is limited. However, there is a lot to learn from the experiences of the universities which have been implementing such programs for years. The purpose of this study is to explore the services offered by teaching-learning centers of the top universities in the world through the analysis of their web sites by using Lee's (2010) categorization of services and Robertson's (2010) classifications of faculty development missions as lenses.

Research questions

This study intends to answer the following research questions:

1. What services do the teaching-learning centers of top universities in the world offer within the framework of Lee's classification of services?

2. What purposes do the teaching-learning centers of the top universities serve within the framework of Robertson's developmental focus areas?

3. How do the services and purposes inform the development of a typology of services and purpose for teaching and learning centers?

Significance

This study provides an insight to the main services, their developmental missions and purposes as well as their services, sub-services, target audience and duration offered by the development centers through web page analysis. Most of the related literature is about the important elements to consider while creating or designing a center, historical review of the centers, the relationship between technology and development centers, but there has been limited research on the offerings of faculty development or teaching-learning center web sites and proposing a model

development center web page for future developers. Since there is only one faculty

development or teaching-learning center systematically designed for specific

development purposes in Turkey and there is limited research related to faculty

development centers and their offerings in Turkey, this study is significant to inform

educational researchers about this subject. This study also presents the most

commonly offered services and the missions that these services carry out by the

development centers of the top-twenty-eight universities around the world according

to the US News and World News Rankings (2016). Therefore, the findings can be a

model of the best practices for future faculty developers. They can determine the

program's mission and the kinds of development to which the program will attend.

Instructors at higher education can also benefit from this study in that they will be

informed about the services they use as well as their purposes and missions.

Definition of key terms

Faculty development is a term which gained significance since the 1960s in the

U.S.A and it is about all kinds of systematically designed practices for faculty

members to develop themselves professionally so as to meet the demands of

students, institution, society and their personal satisfaction. While faculty

development initiatives are more related to research-based scholarly expertise of

faculty members in the 1950s, it has turned into a more integrated approach which

encompasses a wide range of topics such as having better balance between work and

life, getting support for the challenges of dual-career couples, meeting the demands

of parenting as well as taking care of aging parents, improving leadership and

management skills and professional academic skills (Steinert, 2000) as well as

organizational, faculty , instructional and curriculum development (Robertson, 2010).

Cross-case analysis is a research method that focuses on the comparison of commonalities, similarities and differences in the events and cases (Khan & VanWynsberghe (2008). It enables researchers to make inferences and mobilize knowledge from individual case studies and draw hypotheses, or theories derived from the original case (Khan & VanWynsberghe (2008). Although sometimes case-studies are criticized to be blunt, there are systematic ways to reaffirm the role of case-studies, and cross-case analysis is one of them.

Faculty is a term that refers to the tenure-track academic staff of a university who holds various ranks such as full professors, associate, assistant and adjunct professors.

CHAPTER 2: REVIEW OF THE RELATED LITERATURE

Introduction

This literature review examines the major adult learning theories, the history of faculty development trends with a focus on the term *faculty development* itself, the underlying reasons of the need for faculty development throughout years, proposed faculty development models throughout years and programs and services offered in faculty development programs and teaching-learning centers.

This chapter starts with the major adult learning theories, continues with the definition of the term *faculty development* and the historical background of early faculty development traditions and highlights more recent faculty development traditions with a focus on proposed faculty development models.

Adult learning theories

Andragogy as an adult learning theory

There have been different learning theories of how people learn throughout years. One of the most significant learning theories is that adults learn differently from children. With the start of systematic organization of adult education in 1920s, teachers of adults experienced several problems regarding the implementation of old pedagogical models and many researchers revealed that pedagogical models were insufficient for adult learning (Knowles, 1970). Although the term *andragogy* was used by European authors to talk about it in parallel with pedagogy but for adults, Knowles (1970) redefines andragogy as "the art and science of helping adults learn, in contrast to pedagogy as the art and science of teaching children" (p.43).

Knowles (1970) states that there are four major assumptions about the features of adult learners: The first one is that people's self-concept shifts from being a dependent personality towards being a self-directed human learning. Secondly, they "accumulate a growing reservoir of experience" which will be beneficial for their future learning (Knowles, 1970, p.45). The third one is that their readiness to learn is directly related to the developmental tasks that their social roles require and the final one is that their orientation toward learning becomes more performance-centered in time. Based on Knowles's assumptions on andragogy, one can claim that andragogy views adult learners as independent learners who have the skills of choosing what is to be learned and how is to be learned as well as the capacity to interpret what they learn according to their existing schema.

There are significant aspects of andragogy in line with faculty development centers, teaching-learning centers as well as their online versions. The first one is the learning climate. Knowles (1970) states that adults learn best when they are in an environment they feel at ease. Thus, an online platform where faculty members, instructors or students can easily reach the self-study resources they need can be seen as a safe environment. Another aspect is that andragogic theory prescribes a process of *self-evaluation* for learners (Knowles, 1970). Most teaching-learning centers provide instructors with the opportunity to evaluate their teaching through several services such as individual consultation sessions and evaluation of teaching. Knowles (1970) also claims that learners are motivated to engage in learning as long as they feel a need to learn. Development centers essentially provide learners with a wide range of information and services of which users can choose anything they wish.

Self-directed learning

Self-directed learning is defined as a largely self-planned and self-managed type of learning whose control lies with the individual learner (Candy, 2004). This view has similar features with andragogy as it also emphasizes learner autonomy. Houle identifies three classes of learning motivations: goal-oriented learners, activity-oriented learners and learning-oriented learners (as cited in Candy, 2004). Goal-oriented learners usually have specific questions or intentions during the learning process as they have specific learning goals that are usually short-term and pragmatic. Activity-oriented learners may be motivated by several reasons usually unrelated to the apparent purpose of the activity such as getting a certificate or degree or following a family tradition. Finally, learning-oriented learners view learning as an ongoing process or a habitual activity which is enjoyable and stimulating for them. All these three types of learner motivations are in line with self-directed learning theory as all types of learners choose to learn by themselves even if their reasons may vary. Teaching-learning centers are proper platforms for all types of self-directed learners because they provide a wide range of services such as compulsory orientations for new faculty members, evaluation of teaching services or individual consultations upon request as well as workshops or self-study resources for all instructors, faculty or non-faculty.

Since individuals are inclined to lifelong learning according to this theory, it is true to say that there is a growing need for accessing to the learning materials in a quick way. Candy (2004) asserts that "not only educational providers, but also governments, companies, professional associations and community groups have become involved in providing constant support for lifelong learning" (p.45) and there

has been a great deal of attention not only to individual learners, but to concepts such as learning organization, learning community or learning society. Therefore, it can be inferred that learning centers, teaching and learning centers or faculty development centers are the natural results of this growing need and demand in the society for easy access to specific teaching and learning communities.

Self-directed learning, online learning and computer literacy skills are also interrelated (Candy, 2004). She states that learners can access an unlimited range of online information regarding their learning needs and interests; use information, and can contact with fellow learners and experts, which are all satisfying for their self-directed inquiries whereas developers can spread and develop their offerings easily through online platforms (Candy, 2004). However, she points out that a certain amount of computer literacy or ICT skills is surely an advantage for a learner which she defines as "digital divide". Thus, it can be claimed that an instructor who uses technology for finding development opportunities or resources through an online development center has surely an advantage over a peer who does not have the basic computer literacy skills or who does not use it.

Transformative learning

Transformative learning is defined as the sequence of steps for effective change in a frame of reference (Mezirow, 1997). According to this theory, adult learning occurs when adults are able to make connections between their new learning experiences and their existing frame of reference (Mezirow, 1997). He states that there are four main processes of learning: The first process is to elaborate an existing view. People start to find more evidences to support their already existing beliefs or ideas on a

topic. The second one is to establish new points of view. In this process, we encounter new events or get to know new groups which may change our existing scheme. The third one is to transform our point of view, which is a process in which critical reflection on our ideas brings about new experiences and new results. Finally, we transform our habits of mind through a critical reflective of our generalized bias in a different way. It is the final phase where transformations in learning occur and it is not easy to accomplish (Mezirow, 1997). Transformative learning theory has similar features with andragogy and self-directed learning due to the fact that they all view adults as active, self-conscious and autonomous learners who can reflect critically on what they have already known and what they have recently learned.

The latest advancements in technology have a great impact on all industries, especially higher education. In connection with that, workplaces become more competitive as lots of new skills are required for an employee such as effective decision-making, technological skills or teamwork skills. Mezirow (1997) claims that it is not enough for people to acquire knowledge; they also have to possess the skills of understanding and manipulating it especially in the workplace. Therefore, it can be assumed that for faculty members who have classes to teach should not be contented only with their subject area expertise. They should seek ways to improve their teaching skills and they should be open for academic and professional development. At this point, teaching-learning centers serve as platforms where faculty members, students, anyone who is a part of higher education can improve themselves on a wide range of topics in different ways and they provide self-directed learners with the opportunity to define their learning goals, select the appropriate

learning materials and get involved in the learning process either via center web sites or physically.

Reflective practice

Schön (1987) focuses on the relationship between the types of knowledge valued in higher education and the types of competence appreciated in professional practice. Schön (1987) argues that universities do not provide fundamental knowledge to their students for their future use as future professionals; they are the places committed to a specific epistemology which lacks practical competence. He proposes that higher education undergraduate and postgraduate programs should not only focus on theoretical knowledge, but also foster practical knowledge and experience offered in art and design studios, music conservatoires, athletics coaching and apprenticeships in the crafts. In order to do that, "reflective practicum" is necessary as student learning can be effective by doing with the assistance of professionals as coaches (Schön, 1987). He highlights the positive effects and the benefits of reflective practice through the examples of best practices in coaching in musical performance, psychoanalytic practice, and counseling and consulting skills. In this sense, it can be said that all professionals need to learn how to reflect critically during his education so as to adopt practical competence on his profession. Schön (1987) proposes that the most important competence for all professionals is *reflection*. According to his reflection theory, continuous improvement in any profession can be done only through two types of reflection: "reflection in action" and "reflection on action" (Schön, 1987).

REFLECTION IN ACTION	Schön's Reflection	REFLECTION ON ACTION
-thinking ahead		-thinking through subsequent to situation
-analysing		-discussing
-experiencing		-reflective journal
-critically responding		
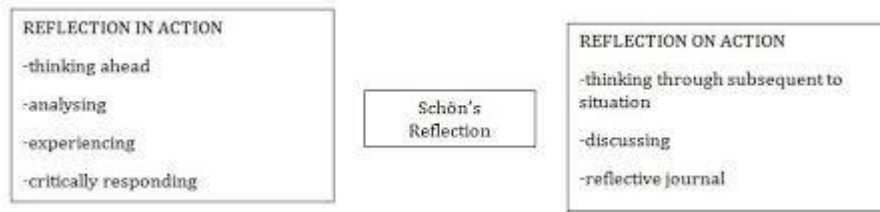
Figure 1. Schön's theory of reflection

Reflection in action refers to the ability of a practitioner to reflect his/her feelings and ideas in a direct, professional way in a problem situation whereas reflection on action is the process of analyzing the reaction to the situation deeply after the incident (Schön, 1987). He claims that real professional growth occurs when one learns how to reflect in action and on action properly and this is what should be taught at universities for future professionals. This theory is in parallel with other adult learning theories, especially with transformational learning in that they both favour autonomous learner who reflects critically.

Critically reflective practice

Brookfield (1998) defines critically reflective practice as "a process of inquiry involving practitioners in trying to discover, and research, the assumptions that frame how they work" (p.197). In other words, it is the process through which teachers become aware of their own assumptions and to relate to students' learning process. Brookfield (1998) states that critically reflective practitioners research these assumptions through four complementary lenses: "the lens of their own autobiographies as learners of reflective practice, the lens of learners' eyes, the lens of colleagues' perceptions, and the lens of theoretical, philosophical, and research literature" (p.197). The first one, the autobiographic lens enables teachers to analyze their own past as a learner and determine the best teaching practices based on their

past learning experiences (Brookfield, 1998). For example, if a former student remembers a classroom activity which enables him to learn in a better way, he will probably use it in his class as a teacher in the future. Similarly, bad experiences will work in direct opposite way.

The second lens is seeing oneself through learners' eyes. It usually refers to the student feedback on classes and Brookfield (1998) denotes that an anonymous feedback provides teachers with the opportunity to help them teach more effectively. He adds that if the learning experiences of people are not analyzed and discussed, no methodology or theory will be appropriate. Most teaching-learning centers provide several evaluations of teaching services to instructors and student feedback is one of them. They are usually conducted regularly each semester and presented to instructors, sometimes with an individual consultation service upon request.

Colleague experience is another lens through which an instructor can critically reflect on his teaching practices. Brookfield (1998) states that as they describe their own experiences dealing with the same problems and challenges that the instructor faces, the instructor is able to check and refresh his own perspectives and practices of teaching. Teaching-learning centers provide similar opportunities for instructors, especially to new teaching assistants to gather around regularly and share their experiences with each other so that they can learn from different experiences.

The fourth and final lens is theoretical literature. Brookfield (1998) states that "theory can help *instructors* 'name' *their* practice by illuminating the general elements of what *they* think are idiosyncratic experience" (p.200). By researching

theoretical framework of some common practices, instructors can gain more insight

of what they are experiencing and can see it with multiple points of view. All

teaching-learning centers analyzed in this study provide all instructors, even the ones

who do not work in these particular institutions, with self-study resources on

teaching drawn from education literature under the headings of commonly

encountered problems, how to deal with crisis in classroom and so on. Especially

early career faculty or new teaching assistants can read theoretical analyses and

switch their interpretive frames properly by exploring these resources and

informative texts.

The historical background of the trends in faculty development

The definition of faculty development

The term *faculty development* has many different definitions that have changed

throughout years. Lewis (1996) states that the sabbatical leave instituted in Harvard

University in 1810 can be seen as the oldest form of faculty development (as cited in

Ouellet, 2010). However, in the 1970s, the term faculty development as we

understand today was used mainly for any kinds of attempts and activities to led the

professional development of faculty members in terms of teaching skills. For

example, Francis (1975) defines faculty development as an institutional process that

aims to change the competencies and behaviours of faculty members so that they can

excel the standards in meeting student needs, their own needs, and the needs of the

institution. Similarly, Centra (1976) states that in 1970s, the majority of faculty

development programs attempt to enable faculty members to improve and sharpen

their teaching skills and knowledge. Actually, there were some attempts to develop

faculty before the 1970s. However, Ouellet (2010) states that in the 1950s and early

1960s, not many institutions had formal programs addressing teaching improvement. He adds "the focus of support was on the development of scholarly expertise as indicated by research success and publication rates" (Ouellet, 2010, p.5). Thus, it is proper to say that the definitions and the focus of faculty development shifts from a research-based scholarly expertise view to a more "excellence in teaching" view from the 1950s to the 1970s.

In international contexts, a more encompassing term, *educational development* is used for academic development, staff development, and quality enhancement (Ouellet, 2010). Thus, it should be noted that sometimes *educational development* and *faculty development* can be used interchangeably in some studies as their purposes and audiences are similar. Robertson (2010) also highlights the fact that there are many different names that correspond to faculty development and what this term encompasses. An informal analysis by the author reveals that the most common words in centers' names are as follows: center, teaching, learning, enhancement, excellence, effectiveness, instructional, faculty, development, and technology (Robertson, 2010).

Why faculty development?: Historical context

There has been a strong interest in improving the quality of faculty for various purposes throughout the years. Starting from the early 1970s, the initiatives for faculty development has existed under different names such as "teaching improvement programs", "faculty renewal efforts" as Centra (1976) defines or "profound reorganization of departmental structures and governance systems" and "retraining in new classroom procedures" by Bergquist and Philips (1975). In 1970s,

as Centra (1976) declares, there were a general disenchantment and dissatisfaction expressed by students, parents and administrators with the quality of university-level instruction. In addition, similar to these days, parents and students had some concerns about the quality of college instruction as the high costs of education required it to be. Bates (2010) describes this tendency as follows: "…the upstart generation began to loud complaints about the quality of teaching and learning on many campuses across the United States universities and colleges responded with research into effective teaching, which resulted in the expansion of faculty professional development to include a focus on instructional improvement" (p.21).

Sorcinelli, Austin, Eddy and Beach (2006) categorized the evolution of faculty development into four main ages: scholar, teacher, developer, learner and the age of the networker (as cited in Ouellet, 2010). According to this categorization, the Scholar Age refers 1950s and early 1960s in which the focus of support is on the development of scholarly expertise as shown by research and publication rates (Ouellet, 2010, p.5). *The Age of the Teacher* is between mid-1960s to 1970s and the early literature of this age describes a focus on elements seen as vital for improving teaching and pedagogical skills. Phillips (1979) mentions that among these elements are admitting top students, hiring new PhDs from the best graduate schools, changing the curriculum, decreasing the student-faculty ratio and buying new instructional hardware. However, they agreed upon that relying only on these elements is not adequate for effective teaching skills. Thus, in 1970s, faculty members started to become dissatisfied with the only focus on research as the definite sign of faculty accomplishment (Ouellet, 2010) and they started to seek ways to improve their instructional skills. Bergquist and Philips (1975) mention several problems such as

low funding, declining enrollment and declining faculty mobility together with demands for accountability described by students, parents, and state and federal officials and they claim that all these factors entail a significant re-evaluation of personal and professional perspectives towards instruction in higher education and student-teacher relationship as well as retraining in new classroom procedures.

This age is also characterized by the foundation of the oldest and the largest professional association for faculty development scholars and practitioners in North America, the Professional and Organizational Development (POD) Network in Higher Education (Austin & Sorcinelli, 2013). In this study, Austin and Sorcinelli (2013) state that the main purpose of POD is to support development in higher education through faculty, instructional, and organizational development initiatives.

The 1980s are defined as *the Age of the Developer* by Sorcinelli (2002). Sorcinelli (2002) states that faculty development programs are supported by institutional as well as foundation funds. In addition, there is a rise of interest in measurable outcomes of teaching and faculty development efforts. Several researchers aimed to evaluate the effectiveness of faculty development programs in different ways. For instance, Erickson (1986) conducted a survey which included approximately 1000 coordinators, directors, committee chairs and administrators' statements of their current development practices at their institutions including some information about their investment and some demographic information. In this study, it was stated that 66% of the 1985's respondents indicated that their institutions' current investment in faculty, instructional, and professional development was much or somewhat greater than it had been three years earlier. Thus, Erickson highlights the increase in

developmental efforts of the institutions in recent years despite the financial problems with an attempt to shed light on the current state of the faculty development programs in the U.S.A higher institutions.

The 1990s are defined as *the Age of the Learner* (Sorcinelli, 2002). During this age, the focus on pedagogical expertise and excellence in teaching skills changed into a tendency which included a focus on student learning (Ouellet, 2010). In other words, the role of a faculty member as a teacher in a higher institution started to become more like as a "guide" or "facilitator" rather than "director", which shows a distinct contrast with the position of the faculty member in classroom in the age of the Scholar. In relation to this new role, student-centered pedagogical methods such as active and collaborative approaches and problem and inquiry-based learning strategies as well as computer literacy, interdisciplinary teaching and web-based instruction gained in importance (Bland, 1998; Ouellet, 2010).

Student learning is not the sole area of interest in *the Age of the Learner*. The relationship between faculty development and information literacy has also been addressed and discussed by some researchers. For example, Ianuzzi (1998) states that each faculty member is influenced by the organizational energy on issues such as distance learning, use of technology in the classroom, and learning communities and they are asked to revise their syllabi, teaching styles and assessment methodologies; librarians can use information literacy to guide faculty to succeed in their own goals (p.100). A few years later, Rader (2007) highlights the necessity and vitality of a partnership and collaboration between faculty and librarians in the area of distance learning and technology. Rader (2007) believes that librarians can contribute to the

learning communities through communicating their experiences via synchronous and/or asynchronous courses, and this requires strong communication and relationships between faculty and librarians.

The multiple roles that the faculty is expected to adopt is among the concerns of the researchers in the 1990s. Austin, Brocato and Rohrer (1997) point out that the faculty members find themselves in a situation where they are expected to fulfil various tasks: teaching, research, public service and institutional citizenship. The results of their study, which includes twenty faculty members in the humanities and social sciences evenly divided between those in a community college and those in a research university (half the participants with less than three years of experience, half with more than fifteen years of experience), lists several recommendations for faculty developers such as mapping out the institution's existing faculty development efforts and asking questions about their roles in the institutional context. Thus, the confusing situation that new faculty members have been through and the mixed roles they are expected to take require a systematic development program and services.

The Age of the Networker refers to the 21st century and is characterized by collective development, multidimensional purposes, centralized units, more measures of impact and effectiveness, firm institutional support and global faculty development profession. Actually, since the early faculty development initiatives in the 1960s in the U.S, most faculty development centers have been organized under one of several structures such as campus-wide unit, individual person, committee, clearinghouse, multicampus or special purpose centers and the goals of these centers have been similar in structure and composition across all institutional types (Austin &

Sorcinelli, 2013). In addition to these types of centers, during the 2000s decade, new partnerships or new models have started to appear such as instructional technology units (faculty instructional technology literacy programs), assessment offices (general education initiatives, course-based assessment), student affairs (retention initiatives such as faculty first-year seminars), graduate schools (preparing future faculty), or writing programs (writing to learn programming) (Sorcinelli, 2013).

Why faculty development today?

Today faculty development activities have a multifaceted nature unlike in those times when they first started in the 1950s. When the first faculty development initiatives started in the 1950s, up to the 1980s, although there were some research on newly arising issues such as declining funding and enrollment and decreased faculty mobility together with demands for accountability requested by students, parents, and officials (Bergquist & Philips, 1975), the main mission of faculty development was fostering the improvement of pedagogical skills of faculty and enhancing the quality of teaching and learning activities in higher education. However, as Sorcinelli (2002) states, *the Age of the Networker* refers to the 21st century and is characterized by collective development, multidimensional purposes, centralized units, more measures of impact and effectiveness, firm institutional support and global faculty development profession. Thus, the mission and the aims of faculty development programs have a paradigm shift from a guidance-to-teachers approach to a more comprehensive set of activities.

With the beginning of the 21st century, some key areas have emerged as an integral part of faculty development. Ouellet (2010) asserts that faculty developers have

already been familiar with the effectiveness of theories of learning such as "reflective practice", adult education" and "adult learning theories". However, he states that, since the needs and principles of faculty have been changing at every stage of their career path, pre-adopted theories and practices need some changes as well. This is the point where effective faculty development implementations are needed. One vital issue is to be able to have better balance between work and life, support for the difficulties of dual-career couples and parenting as well as taking care of aging parents (Ouellet, 2010). Sorcinelli (2002) lists the best practices for supporting early-career faculty as: communication and feedback, performance review and flexibility. She also states that balancing between professional and social life is a concern of faculty development. Similarly, Eaton, Osgood, Cigrand and Dunbar's (2015) research aims to address the concerns of mentoring and balance in social and academic life. The results show that in order for faculty to do their job well, an effective faculty development program is necessary and mentoring and work/home balance are the vital components of such a program (Eaton, Osgood, Cigrand & Dunbar, 2015). In addition, they suggest that "department heads, deans, and other administrators consider the effects of mentoring and other forms of support (such as family leave, sick time, personal days, buyout time for curriculum development, research funding, leadership opportunities, and time for collaborations) on recruitment, development, and retention of faculty" (p.39).

Steinert (2000) states that most of the faculty development initiatives have been related to teaching skills and instructional improvement. However, she points out that faculty development programs should be designed to enhance leadership and management skills, professional academic skills in this century and organizational

development should be on the agenda of teaching improvement programs (Steinert, 2000). According to her study, it can be claimed that although there are plenty of services related to instructional development of faculty, there is a need for further exploration on organizational development as well as faculty development regarding leadership and management skills and professional and academic skills.

Technology and faculty development

Today, in the 21st century, the skills and attitudes expected from faculty members have changed; only the subject area expertise is not enough. Diaz et al. (2009) assert that 21st century faculty members may have interacted with technology extensively by the time Web 2.0 tools began to emerge and they start to use these tools extensively as an integral part of their teaching. As a result, they state that it is an undeniable fact that faculty members today need support in new areas: keeping up with an increasingly technological workplace, developing ways to further integrate technology into the instructional experience, and assessing student learning in a variety of instructional delivery modes as well as the old areas as their predecessors: orienting to the institution, teaching and conducting research, navigating the tenure track, and developing professional networks (Diaz et al., 2009).

In recent years, faculty development tends to be either a distributed service or a centralized service, provided by a unit such as a teaching or a faculty development center (Diaz et al., 2009). According to their study, the characteristics affecting this function are the size and the geographic distribution of the institution. In other words, as the size of the institution gets larger, its services become more distributed. Their study also sheds light on the various focuses on the programs in the U.S.A: Some of

them focus on improving the instructional technology skills of participating faculty members, whereas others focus on developing traditional teaching skills due to numerous reasons such as the size of the institution, the focus of the faculty development efforts, and available resources (Diaz et al., 2009). In this study, it has also been revealed that an effective teaching and learning support program will include faculty development program over several years. The table below shows a proposed faculty development five-year plan.

Table 1
Sample faculty development five-year plan

The Faculty Development Five-Year Plan

Year	Target Audience	Services and/or Areas of Support Offered
0	Graduate Students, Teaching Assistants	▪ Basic instructional strategies and methodologies ▪ Introduction to learning technologies ▪ Teaching course or certificate to complement graduate degree
1	New Faculty Members	▪ Mentoring with senior faculty ▪ Exposure to institutional policies, culture, and expectations
2–5	Established Faculty Members	▪ Institutional orientation ▪ Ongoing support for new instructional delivery models, technologies, and pedagogies ▪ Advanced course management system support

In this table, it is clear that the instructional support, dialogue and partnership between the senior staff and new staff, technological and pedagogical consultation go hand in hand over years. Relatedly, the authors conclude that: "the process of faculty development must begin before students enter the academic profession and must continue at all subsequent levels of the 21st-century faculty member's career" (Diaz et al., 2009, p. 7).

The technological support for faculty members is not only limited to pedagogical or instructional technology. For some researchers, faculty development can occur in online platforms and faculty can benefit greatly from these kinds of implementations such as hybridising other faculty development practices. In addition, both online and

face-to-face environments could be facilitated for instructional or professional support purposes. (Brooks, 2010). Brooks (2010) asserts that online support such as online forums for collegial interaction can be a significant contribution to faculty development in many aspects by highlighting faculty members' probable wishes to practice and improve skills beyond campus hours or their reservations to connecti share and collaborate with their peers or mentors (for any kind of reason). Additionally, she lists several reasons indicating that online platforms can be ideal for new faculty who may not know where or from whom they should seek the support they need as well as developing a sense of collegial community, making professional connections, and building cross-campus communities of like-minded professionals (Brooks, 2010). She even proposes that a hybrid faculty support program and the use of virtual platforms on campuses should be developed by faculty members. Today, there are many universities that have faculty development center web sites. These web sites serve as great online modes of delivery and easy-to-access resources on various aspects of teaching and learning. Thus, this view reflects how fast the approaches and trends in faculty development have been changing since 1950s.

The necessity for a faculty member to possess a certain amount of technological skills is discussed by other researchers as well. Robertson (2010) proposes that faculty members have to learn to use old and newly emerging technological tools such as course management systems, presentation applications, smartboards, plagiarism programs, streaming media, Podcasting, and social networking tools. He also mentions that sometimes instructional technologists can be housed in the centers in order to guide instructors on how to use technological tools effectively for their

lessons (Robertson, 2010). Considering all these views about technology in educational development center, it can be claimed that instructional technology has a great impact on the development of an education center.

Faculty development trends in Europe

Faculty development is a series of initiatives which aim to support educators in higher education in many countries across the world. According to the study of Chism, Gosling and Sorcinelli (2010), these initiatives are generally known as "educational" or "academic" development in English speaking countries such as Australia, Ireland, New Zealand, South Africa and the United Kingdom. Although faculty development can be practiced under different names, it has a well-established tradition of practices in these countries.

In a study of U.K educational development, the most cited responsibilities of educational development centers (EDCs) were identified as:

- Encourage innovation in teaching and learning
- Implement the institution's own teaching and learning strategy
- Improve teaching and learning quality
- Provide professional development in teaching and learning
- Promote scholarship of teaching and learning (Chism, Gosling & Sorcinelli, 2010 p.245).

According to these identifications, it can be said that developing strategic approach to improving teaching and learning at the institutional level is significant in the U.K approach (Chism, Gosling & Sorcinelli, 2010). In other words, more emphasis is given to enhancing teaching and learning quality in many aspects such as

implementing the institution's own strategies, providing professional development opportunities in the area, innovation practices in teaching and learning and scholarship of teaching and learning rather than providing consultation or cooperative work between colleagues.

Many faculty development or teaching-learning centers around Europe are designed to increase the scholarly base for teaching (Chism, Gosling & Sorcinelli, 2010). For instance, in Sweden, "all faculty members are required to undertake a ten -week course in pedagogy" (Chism, Gosling & Sorcinelli, 2010, p.246). Similarly, in the United Kingdom, newly appointed faculty members are required to have a mandatory course of professional development (Chism, Gosling & Sorcinelli, 2010). These courses are formally examined at the master's level and the faculty members have to create a portfolio of evidence that shows they have met the outcomes of the course (Chism, Gosling & Sorcinelli, 2000).

There is a governing body for Postgraduate Certificate in Teaching and Learning programs: Higher Education Academy (Schaefer & Utschig, 2008). The Higher Education Academy certifies individuals and the programs for the higher education (Schaefer & Utschig, 2008). In addition to the preparation for teaching in higher education, educational development or faculty development is also a close relation with professional development along with tenure and promotion in the U.K. As Schaefer and Utschig state, every new tenure-track faculty is required to complete a compulsory 30 credit hour accredited training program in teaching and learning in Higher Education to earn tenure.

In Finland, Elen, Lindblom-Ylänne and Clement (2007) explore conceptions of the research-teaching relationship held by faculty members in two research-intensive universities through an interview with members from different disciplines about their views of "teaching" and "research". Their study highlights two important features of research-intensive universities in the country: these universities are more research than student-centered and the link between teaching and learning is not a result of one's epistemological ideas but a natural response to the environment's needs (Elen, Lindblom-Ylänne & Clement, 2007). It means that the faculty needs to gain academic insight on teaching and this creates the necessity of carefully-planned faculty development practices in research-centered universities in Finland. Therefore, it can be claimed that European tradition of educational development practices tends to place importance on improving scholarly competence and considers it as the integral part of faculty development.

Proposed models of faculty development and their effectiveness

Several researchers remarked the necessity of faculty development program evaluation and proposed methods to do it (Bergquist & Philips, 1975; Centra, 1976; Cuseo, 1989; Kreber, Brook , 2001).

Bergquist and Philips (1975) point out that a faculty development program should be both comprehensive, including a wide array of teaching-learning enterprise and based on a set of rich but related strategies. They propose a model based on changes in three levels: a) attitude b) process c) structure.
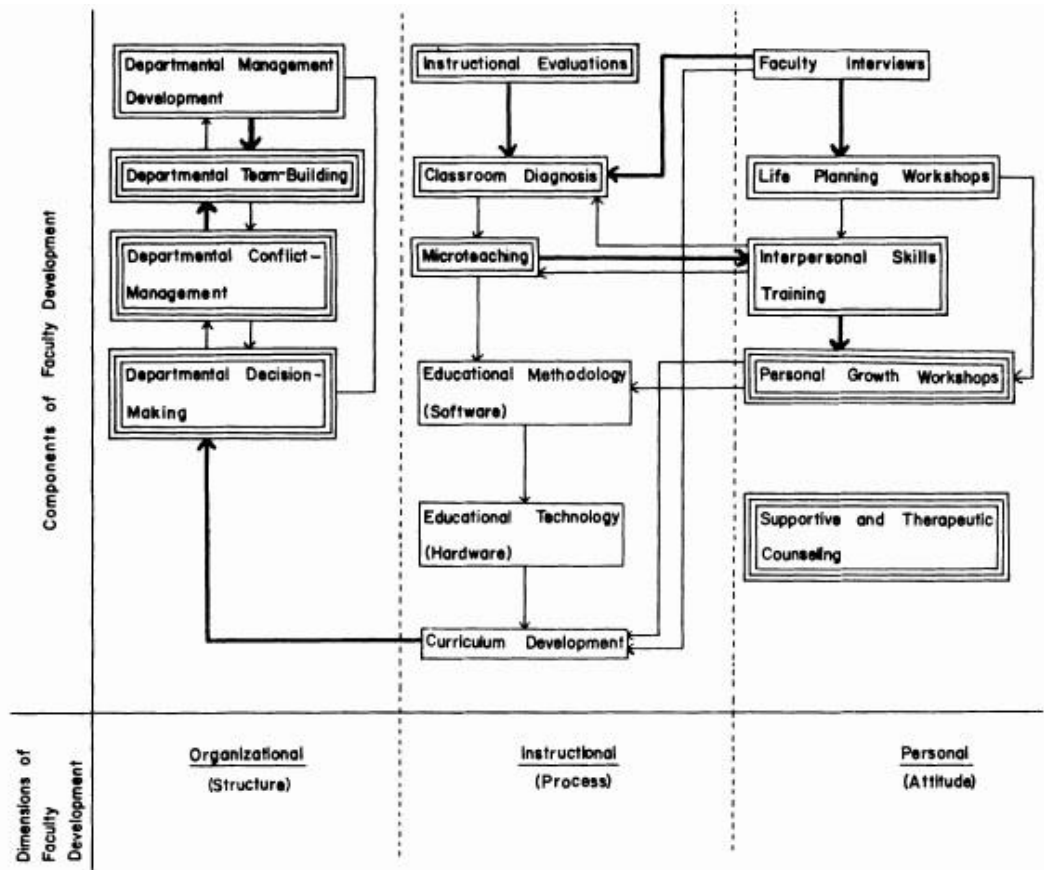
Figure 2. The proposed model of faculty development by Bergquist and Phillips

Figure 2 shows that some of these components are based mainly on issues of attitude

change or personal development. Other components are based primarily on issues of

process change or instructional development. The third set of components is based on

issues of structural change or organizational development. Thus, they are not isolated

units (Bergquist & Philips,1975). Rather, they are interrelated. In other words,

specific programmatic components in this proposed model are in relationship with

one another, which is shown in lines and arrows. Change in one of them will

automatically affect the others. The researchers concluded that instructional

development components were primary, and the personal and organizational

components were secondary. According to Bergquist and Philips (1975), one of the

most crucial points is to choose an entry point to the system. They state that the most

appropriate entry points are "probably faculty interviews, evaluation…and management development" (p.208).

Another example is that Cuseo (1989) states that the assessment of each of the program's individual activities as well as the program as a whole is a necessity. He proposes that both quantitative methods (such as structured interviews, Likert-scale ratings of faculty dissatisfaction/satisfaction with the program and behavioral measures) and qualitative methods (such as feedback sessions and extensive dialogue between faculty and faculty developers) should be used to measure the effectiveness of the faculty development program.

Despite the fact that there are many research studies on the significance of the program, Eble and McKeachie (1985) and Weimer (1990) observed that faculty development programs in the United States needed a systematic approach to evaluation (as cited in Kreber, Brook & Policy 2001). Kreber, Brook and Policy (2001) highlight some examples of evaluation studies and some challenges (such as focus on a particular strategy rather than focusing on a comprehensive program evaluation, relying on too much participants' own reports, lack of consultant expertise, lack of a conduct of large-scale educational research studies) and propose a model for evaluation of faculty development programs.
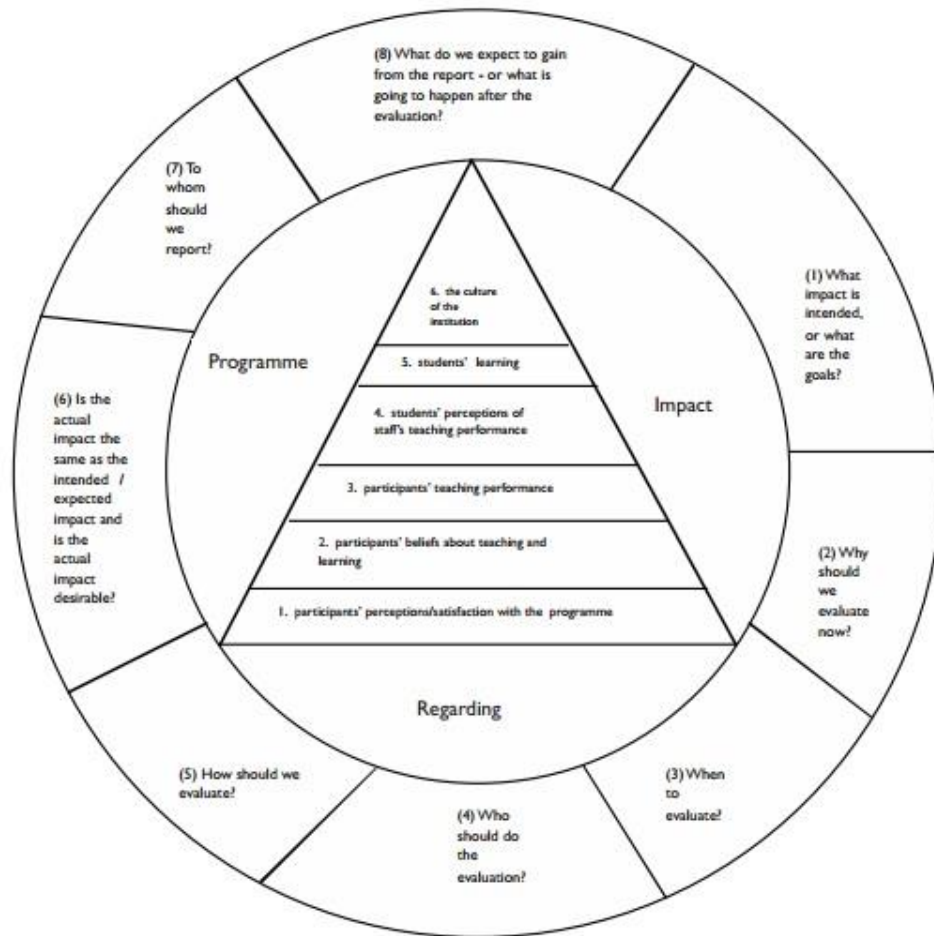
Figure 3. A faculty development evaluation model by Kreber, Brook and Policy (2001)

In Figure 3, six levels of evaluation and eight major questions for any of these levels to be asked are presented. Kreber, Brook and Policy (2001) suggest that the responses to all these questions should be recorded in an "educational development self-portfolio" to serve formative and summative purposes. To use the model, they added, staff developers need to be aware of their program goals and evaluate these goals regularly and in this way, the actual outcomes of the practices can be compared to the goals (Kreber, Brook & Policy 2001, p.100). In their research, they concluded that the proposed model had to have five common staff development areas:

• a centralized course on learning to teach in college;

• private consultations with teaching staff;

• seminars/workshops;

• collaborative action research studies on teaching

• peer consultation services.

Thus, their model is based on the alignment between 1) evaluation strategy and intervention and 2) between evaluation strategy and the level on which impact will be assessed. This is an example of a well-constructed, clear evaluation model which can be helpful for faculty development program developers.

Programs and services

Faculty development, or in a broader term as stated by Ouellet (2010), educational development is a separate field that has been growing and changing immensely since 1950s. Given the fact that the term encompasses a wide range of definitions and meanings related to all kinds of endeavours to support faculty both in terms of professionally and personally, the aims of a faculty development program may vary widely in focus. Robertson (2010) states these different areas of focus as follows:

1. Instructional development

2. Faculty development

3. Curricular development

4. Organizational development

Instructional development aims to provide faculty with the opportunities to improve their teaching skills, learn different methods in line with the expectations of the 21st century students and parents (more student-centered approaches) so that their classes become more attractive and effective. It includes a wide range of activities from

teaching to planning and evaluation so that faculty can provide the best teaching and learning atmosphere in their classroom.

Faculty development refers to the practices aiming to help faculty members with all aspects of faculty work across their careers (Robertson, 2010). Thus, this is an umbrella term that encompasses a wide range of services and/or sub-services aiming to provide improvement in the field of college-level teaching and learning. Here, the focus is not the pedagogical enrichment, but professional and academic advancement of the faculty members through several main services such as research, workshops, and so forth.

In his study, Robertson (2010) defines curriculum development as a set of practices "facilitating instructional design (integrated learning goals, activities, and assessment) in the contexts of course units up to whole programs such as general education or degree programs" (p.39). Thus, this kind of development initiatives aim to foster quality enhancement in the current curriculum practices of the institution. It refers to any kind of studies focusing on a part or parts of the curriculum for better outcomes.

Organizational development aims to help the institution to develop as a learning organization in order to enhance strategic institutional effectiveness through staff development in many aspects (Robertson, 2010). Thus, it can be claimed that all kinds of services designed to make the development center as a formal, dedicated part of the university can be categorized under organizational development including the mission statement, staff information and contact information.

The services and programs offered by faculty development programs may vary in terms of scope and content. However, there are some common types of programs that fall within certain categories (Lee, 2010). According to Lee's study, these are: *workshops, individual consultations, classroom observations, orientations, grants, faculty fellows, teaching circles, faculty learning communities, management of grand-funded projects and engagement in national projects*.

Workshops refer to a single event or series of events offered by center staff, faculty or staff members on any topic Lee, 2010, p.26). Lee (2010) also states that workshops are among the oldest service provided by teaching and learning centers for professional improvement.

Individual consultations take place when a faculty member meets one on one with a center staff or with a faculty fellow on any topic regarding teaching and learning such as the introduction of a new teaching strategy, course and syllabus development, or strategies to address poor student evaluations in one or more areas of classroom practice (Lee, 2010). Sorcinelli (2002) states that it is significant for a development center to have a physical place for individual consultation. Thus, it can be concluded that individual consultations are also among core services and constitutes as the oldest form of services in similar centers.

Classroom observations occur usually at the request of a faculty member who invites a center consultant to observe one or more sessions (Lee, 2010). Lee (2010) also adds that usually individual consultation both precedes and follows classroom observation.

Orientations usually take place at the beginning of the fall for new faculty and graduate teaching assistants (Lee, 2010). Although the duration and the content may di differ, the main aim is to welcome them and provide them with information and skills they need.

Grants are usually provided to faculty members or departments with the aim of supporting an aspect of curriculum development such as educational software, partial support of a graduate student, travel to a teaching-related conference, payment of an external consultant, or a working retreat for faculty (Lee, 2010). Grants are significant and necessary tools to support university development. There is some research that reveal the relationship between grants and faculty development. Hagstrom (1970) reveals that there are moderate correlations between various measures of grant support-such as percentage of faculty with extramural research grants-and departmental prestige.

Faculty fellows have teaching and/or department duties and they can work on a project, develop a program, or perform a service negotiated with the center (Lee, 2010).

Teaching circles consist of six to eight faculty members who discuss some common topics such as active learning, problem-based learning, teaching portfolios and so on (Lee, 2010). These circles can include faculty members from different departments. Blackwell, Channel and Williams (2001) highlights that the term teaching circle is used to refer to both discipline and cross-discipline groups.

Faculty learning communities consist of eight to ten faculty members from different disciplines who gather around some focal point of concern for a semester or, more commonly, for a full year (Lee, 2010). Faculty learning communities take much more time and require more work and resources. Thus, it can be said that it is much more extensive than teaching circles. There are two categories of FLCs: cohort-based and topic-based (Cox, 2004, p.4). The cohort-based faculty learning communities address the needs of a group of faculty whereas the topic- based faculty learning communities focus on a special campus teaching and learning need such as team teaching, diversity, or departmental assessment of general education (Cox, 2004).

Management of grant-funded projects promotes the partnership with other academic and support units and other institutions to obtain grants for supporting a project on its campus such as inquiry-guided learning; first-year seminars; reform in science and so on (Lee, 2010). She also claims that successful competition for grants is crucial to enhance the status of the center on its own campus as well as it promotes support from the administration (Lee, 2010, p.28).

Engagement in national projects is important in terms of enhancing the visibility of the institution and the status of the center on its own campus (Lee, 2010). Faculty development centers can engage different kind of national projects such as the American Association of Colleges and Universities ' (AAC & U's) Greater Expectations Project like in the US or as Turkish Academic Network and Information Center in Turkey.

While *workshops, individual consultations* and *classroom observations* are the characteristics of the earliest offerings in the field of faculty development and still the programs most seen in many centers, the others are relatively newer (Lee, 2010). The researcher also states that these are not the only types of programs and services offered by a program. Centers may assist in the recognition of excellence in teaching, provide resources on teaching, produce their own newsletters with useful articles or develop websites. In addition to Lee's categorization, Mooney (2010) elaborates on the programs that should be adopted by faculty development centers. These are *peer observation of classroom teaching, planning and supporting new faculty orientation, workshops on preparing a tenure and promotion dossier, technology support and training* and *producing web resources and newsletters.*

Ellis and Ortquist-Ahrens (2010) propose some options for programs and activities for faculty development programs. These include:

- One-time events: Workshops, institutes and academies, symposia and conferences, open classroom events
- Ongoing programming: Book clubs or discussion groups, teaching circles, communities of practice and faculty learning committees, programs for new faculty, certificate programs, mentoring and consultations, web sites and grants.

Robertson (2010) divides the delivery of these services into two main categories: *centripetally* and *centrifugally.* Centripetally means bringing in clients physically (to workshops) and electronically (to the website); centrifugally refers to go out to clients physically (making house calls) and electronically (through Podcasting)

(Robertson, 2010). Thus, some of the faculty development center web pages analyzed in this study fall within the category of centripetal delivery. This type of delivery is important as they provide 24/7 instant access to developmental support to faculty members. In addition, some of them offer centrifugal delivery as clients can meet consultants in person through some services such as individual consultation or classroom observation.

The websites of teaching-learning centers are also great ways of "modern advertising" as they become easy-to access in this way. Neal and Peed-Neal (2010) see the web sites as a promotion method for the actual centers and state that program developers should consider how to use them strategically and tactically in their promotional program. They list several suggestions for the ideal web sites of faculty development. One of them is that web sites should be clear so that faculty can track information at the top (Neal & Peed-Neal, 2010). They also advise developers to ensure quick downloads, check the accessibility and readability of the site on browsers and follow the Americans With Disabilities Act (ADA) guidelines. Graphic design and color of the pages is another concern. Neal and Peed-Neal (2010) assert that what site includes is the most significant factor in its value to the faculty. Their tips include a wide range of suggestions related to contact links, links to web sites of allied support units, tracking user data, electronic mailing lists, print materials and newsletters. Kuhlenschmidt (2010) also suggests that web sites are important representations of the centers and their values. A center web site should provide timely information about events and resources, online center books and instructions on making donations following institutional policies (Kuhlenschmidt, 2010). She

also advises developers to use POD (Professional and Organizational Development Network in Higher Education) web site as it has valuable resources.

As can be seen in this chapter, there are many resources and tips for a teaching-learning center web site design that developers can benefit from depending on their objectives. Some of these tips include the explanation of common programs and main services as well as faculty development and evaluation models whereas others offer several technical and content-wise tips for an online development center.   In addition, many resources provide information on the history of faculty development. The researcher aimed to compile and present them in an organized way so as to offer a deep understanding of faculty development trends of the top twenty-eight universities around the world.

CHAPTER 3: METHOD

The purpose of this study is to explore the services offered by teaching-learning centers of the top universities in the world through the analysis of their web sites by using Robertson's (2010) developmental classifications and Lee's (2010) categorization of services as lenses. This chapter aims to explain the research design, and provides details about data collection and analysis procedures. It provides background information about cross-case analysis, and explains case oriented approaches to cross-case analysis and typologies.

Research design

This study uses cross-case analysis to develop a typology of main services offered, and purposes served by the teaching-learning centers of top-universities in the world.

Khan and VanWynsberghe (2008) define cross-case analysis as a research method that focuses on the comparison of commonalities and difference in the events, activities, and processes. Case analysis enables the researcher to describe the influencing factors to the outcomes of the case, seek an explanation related to the similarities and differences and draw hypotheses, or theories derived from the original case (Khan & VanWynsberghe 2008).

Case studies are often considered to be blunt as the outcomes do not always represent a broader representation or the outcomes of the study mainly depend on the ability of the researcher to generalize or compare cases. For this reason, Yin (1981) states that it is necessary to reaffirm the role of the case study as a systematic research tool. At

this point, cross-case analysis is preferred as it takes out data from several case studies and therefore comparisons among cases can construct meaningful linkages (Khan & VanWynsberghe, 2008). In addition, cross-case analysis helps researchers build a theory or draw meaningful conclusions (Eckstein, 2002).

Cross-case analysis provides the opportunity for researchers to enhance the generalizability of the results (Miles & Huberman, 1994). Thus, a researcher can find out whether the results of his/her study are applicable to other similar settings or not and present a theory for similar studies. To Miles and Huberman (1994), another reason for cross-case analysis is to enrich understanding and explanation. Multiple cases help researchers find negative cases to strengthen the theory (Miles & Huberman, 1994). This method enables researchers to make generalizations in a systematic and meaningful way.

Case oriented approaches to cross-case analysis

There are many well-known cross-case analysis approaches used in cross-case analysis and case-oriented approach is one of them. Della Porta (2008) states that case oriented approach provides the opportunity to make generalizations limited to the cases covered. To her, case-oriented approach is very effective as it fosters the development of a strong and efficient dialogue between the researcher's ideas and the data analyzed (Della Porta, 2008).

Case oriented approach is sometimes called as *the most different design* since it attempts to "compare cases that differ as much as possible in order to find similar processes or outcomes in diverse sets of cases" (Khan & VanWynsberghe, 2008,

p.12). In other words, case oriented approach aims to present a wide range of cases so as to benefit from various experiences and reach fruitful conclusions without focusing on the frequency distribution.

Ragin (1997) states that case oriented researchers consider cases "as meaningful but complex configurations of events and structures" and they view cases as whole entities intentionally selected (p.2). Therefore, the researcher starts choosing data knowing the fact that the data may yield to results sufficient enough for comparison and contrast (Ragin, 1997, p.2).

Typologies

In recent years, more and more qualitative researchers have started to use *typologies* in their studies (Bennet & Elman, 2006). To Khan and VanWynsberghe (2008), typologies occur when sets of cases are categorized into groups that share specific configurations. The clusters can be sorted along several dimensions: deconstructing prior conceptions, collecting multiple cases and dividing them based on essential elements or comparing outcomes across a set of cases (Khan & VanWynsberghe, 2008).

George and Bennet (2005) state that in typological theory, the variables are not necessarily theoretical but "they must be eventually controlled by theory of some sort to be reliable" (p.239). Although they are not enough to constitute theories on their own, they can serve as starting points for theory construction (George & Bennet, 2005).

Context

Teaching-learning centers have been serving as guidelines for a wide range of audiences on various areas ranging from instructional assistance to professional support since late 1950s. Although these initiatives can sometimes be named as *faculty development*, the common purpose is to provide all kinds of assistance that faculty may need. In the 1960s, the practices of teaching-learning centers in the U.S were more classroom-based, which strive to provide instructional assistance to faculty (Ouellet, 2010). However, in years, the content of assistance has become broader and richer with the emerging of new development areas such as personal development (self-reflection, vitality and growth), instructional development (course and student-based initiatives) and organizational development (program, department and institution-wide efforts) as well as curriculum development (Ouellet, 2010 ; Robertson, 2010).

With the latest advancements in technology and internet, more and more teaching-learning centers have started to create web sites, which functions as "modern advertising". Neal and Peed-Neal (2010) see the web sites as a promotion method for the actual centers and believe that program developers should consider how to use them strategically and tactically in their promotional program. In addition, Kuhlenschmidt (2010) suggests that web sites are important representations of the centers and their values. For this reason, the web sites of the teaching-learning centers of top twenty-eight universities in the world were selected as data so as to analyze the services they offer as well as the purposes.

Sampling

The teaching-learning web pages of the top twenty-eight universities in the world according to the US News and Rankings (2016) were selected as data sources. Information about one of the universities was not available, however, due to system maintenance. Instead, the teaching-learning center web page of another university listed was selected.

Table 2
Universities and programs

University	Program
Harvard University	Derek Bok Center for Teaching and Learning (DBCTL)
Massachusetts Institute of Technology (MIT)	Teaching and Learning Laboratory (TLL)
University of California, Berkeley	Center for Teaching and Learning (CTL)
Stanford University	Teaching Commons (T Commons)
Oxford University	Oxford Learning Institute (OLI)
California Institute of Technology	Center for Teaching, Learning and Outreach (Caltech)
University of California, Los Angeles	Center for Community Learning (CCL)
Columbia University	Center for Teaching and Learning (CTL)
University of Chicago	Chicago Center for Teaching (CCT)
University of Washington	Center for Teaching and Learning (CTL)
Johns Hopkins University	Center for Educational Resources (CER)
Princeton University	The McGraw Center for Teaching and Learning (CTL)
University of Pennsylvania	Center for Teaching and Learning (CTL)
Yale University	Center for Teaching and Learning (CTL)
University of Toronto	The Centre for Teaching and Learning (CTL)
University of Michigan	Center for Research on Learning and Teaching (CRLT)
Imperial College London	Educational Development Unit (EDU)
University of California-San Diego	Teaching and Learning Commons (TLC)
Duke University	Teaching and Learning Center (CIT)
Cornell University	Center for Teaching Excellence (CTE)
University College London	Teaching and Learning Portal (TLP)
University of California-San Francisco	Teaching and Learning Center (CIT)
Northwestern University	Searle Center for Advanced Learning and Teaching (SALT)
University of Wisconsin-Madison	Vice Provost for Teaching and Learning
University of Zurich	Center for University Teaching and Learning (CUTL)
University of North Carolina	The UNC Center for Faculty Excellence (CFE)
University of Minnesota	Center for Educational Innovation (CEI)
University of Texas	Center for Teaching and Learning (CTL)

Method of data collection and analysis

The researcher first prepared a spreadsheet including the following the columns: university, program, target audience, duration, mission, main service, sub-service and purpose so as to develop a database about the teaching-learning centers of the selected universities (Figure 4).

	A	B	C	D	E	F	G	H
1	University	Program	For who?	Duration	Misson	Main Service	Sub-Service	Purposes
2	UofMichigan	CRLT	Faculty	Permanently (Upon Request)	Instructional Development	Consultation	Call-us	Assisting instructors about issues arising in their teaching

Figure 4. Sample data collection sheet

After that, after reading each piece of information provided by the centers, the researcher identified the services offered using Lee's (2010) categorization within the framework of the missions as classified by Robertson (2010). When any of the main services did not fall into Lee's categorization, the researcher developed additional categories. These additional categories of main services are teaching, non-degree programs, evaluation of teaching (defined as classroom observations by Lee), self-study, testing-grading, career support, tutoring, research, credit workshops, instructional technology, community-campus partnerships, orientations, speeches, degree programs, non-degree programs, planning, donations, community service and courses. The spreadsheet helped the researcher sift and sort main-services related data within the framework of each mission.

During the analysis process, the researcher encountered a different mission that did not fall into Robertson's classification of missions and defined it as *academic and professional development of students*. Thus, the analysis of services and their purposes resulted in the development of a fifth area of focus.

Next, using the same spreadsheet, the researcher arranged and collated purposes

mission by mission and, main service by main service (Figure 5).

	A	B	C
1	Mission	Main Service	Purpose(s)
2	Faculty Development	Career Support	The Institute offers support to departments and individuals in introducing 'PDR' schemes to suit their needs and based on principles agreed by the University's Personnel Committee.
3	Faculty Development	Career Support	Contact info for faculty who seeks ways to shape their careers, UAS forms, related links(Personal development review principles, personel development review:online course), Documents(PDR Sample forms)
4	Faculty Development	Career Support	The network can help anyone who is a member of administrative or support staff up to grade 8 in the University (including academic-related staff and colleges) and who is looking for confidential, impartial advice about an internal job application or a job interview or with rewriting their CV. The network offers access to a number of managers who are also experienced recruiters and who have volunteered to meet colleagues from across the University and mentor and guide on how to write effective job applications and prepare for/learn from interviews.
5	Faculty Development	Career Support	Details of how the network operates, the ways to ask for a mentor
6	Faculty Development	Career Support&Research&Degree Programs	The Study Assistance Scheme helps employees who wish to Study for a degree, Undertake a doctorate programme, Study for a professional, job-related qualification.

Figure 5. Faculty development, main services and purposes

Finally, the researcher prepared a typology of main service and purposes. To this

end, she first listed and presented the main services falling under each mission. Then,

she prepared a list purposes for each main service, classifying each purpose under a

mission.

CHAPTER 4: RESULTS

Introduction

This chapter starts with the overview of the four aims of faculty development

proposed by Robertson (2010) and continues with the content analyses of main

services and their purposes offered by the top twenty eight universities listed in the

US News and World News Rankings according to these aims. The main services

offered in the teaching and learning center web pages of each university were

analyzed within the categories of the name of the university, program, target

audience, duration, mission, main service, sub-service and purpose(s) using

spreadsheets through the lenses of faculty development missions proposed by

Robertson (2010) and Lee's (2010) categorization of services.

Robertson (2010) states that it is the kinds of development to which the program will

attend determines the program's mission. These are the choices he offers:

1. Faculty development

2. Instructional development

3. Organizational development

4. Curricular development

Faculty development refers to the practices aiming to help faculty members with all

aspects of faculty work across their careers (Robertson, 2010). During the mission

analysis of services on the faculty development web pages, career support,

consultations, courses, faculty learning communities, mentoring, publications,

research, self-study, tutoring and workshops are categorized as main services aiming at faculty development as they provide professional and academic support necessary for the career development of faculty.

Instructional development is a set of endeavors which aims to help faculty who have the responsibility of teaching to learn to teach ever more effectively (Robertson, 2010). Therefore, during the analysis of the mission of services on the faculty development web pages, anything related to improving the instructional skills of faculty is categorized under instructional development.

Robertson (2010) defines the aims of organizational development as "helping the institution to develop as an intentional learning organization in order to enhance strategic institutional effectiveness, for example, through a new chairperson and staff development" (p.39). Thus, organizational development can be considered as a set of practices that aims the center grow as a formal learning institution. During the analysis process, all kinds of practices which help the faculty development center become a deliberative institution such as career support, community-campus partnerships, consultation (which includes about us, history, mission and similar information to users), courses, donations, engagement in national projects, faculty learning communities, publications, some workshops, instructional technology, publications, speeches, orientations and management of grant-funded projects are categorized under organizational development.

Curricular development facilitates instructional design in the context of course units up to whole programs (Robertson, 2010). In the mission analysis of the services on

the web pages, consultations, faculty learning communities, self-study, workshops, grants and community-campus partnerships are categorized under curriculum development as the aims of each service serves to enable a part or parts of curriculum to develop and advance.

There are two more terms used by the researcher as the mission of programs during the analysis. These terms are *professional development* and *academic development* of students. The former one represents all kinds of professional development opportunities for undergraduate students and graduate students who are not teaching assistants and post-docs such as some workshops, teaching mentoring, non-degree programs, orientations, courses and self-study resources. The latter represents the services which provide academic support to especially undergraduate students such as individual consultation, consultation, mentoring, non-degree programs, research projects, self-study resources, publication, teaching, tutoring and self-study. The reason why these terms are chosen is that none of the terms proposed by Robertson (2010), faculty development, instructional development, curricular development and organizational development, fully embodies what these terms truly represent.

Universities and programs

The US News and World News Rankings (2016) lists the institutions from the U.S and other countries based on their academic research performance and global and local reputations. The researcher analyzes the top twenty-eight universities listed in the US News and World News Rankings and the faculty development programs they offer via faculty development center web sites. Each of these twenty eight universities has web pages specifically designed for teaching and learning activities.

Universities and target audience

The centers for teaching and learning are designed for specific audiences and each service takes different times for different audiences as shown in Table 3 below.

Table 3
Universities and target audience

Universities	Faculty	Graduate Students	Post-docs	TAs	Undergraduate Students	Departments	Others	Mentors/ Advisors	Administrative Staff	Support Staff	Early-career faculty	International Students	External Examiners	Mentoring Program Designers	New Faculty
Harvard University	✓	✓													✓
Massachusetts Institute of Technology (MIT)	✓	✓	✓	✓											✓
University of California, Berkeley	✓	✓		✓		✓	✓	✓						✓	
Stanford University	✓			✓				✓							✓
Oxford University	✓	✓				✓		✓	✓	✓					
California Institute of Technology	✓	✓		✓	✓			✓							
University of California, Los Angeles	✓	✓			✓	✓	✓								
Columbia University	✓	✓		✓											
University of Chicago	✓	✓	✓	✓							✓				✓
University of Washington	✓	✓		✓				✓		✓					✓
Johns Hopkins University	✓	✓	✓												✓
Princeton University	✓	✓		✓	✓	✓	✓	✓				✓			✓
University of Pennsylvania	✓	✓		✓							✓				✓
Yale University	✓	✓	✓	✓	✓										✓
University of Toronto	✓	✓		✓	✓						✓				
University of Michigan	✓	✓	✓	✓		✓	✓	✓	✓						
Imperial College London	✓	✓	✓	✓						✓	✓		✓		✓
University of California-San Diego	✓	✓		✓	✓			✓				✓			✓
Duke University	✓			✓											✓
Cornell University	✓	✓		✓		✓						✓			
University College London	✓	✓	✓	✓	✓					✓					✓
University of California-San Francisco	✓				✓										
Northwestern University	✓	✓	✓	✓		✓	✓						✓		
University of Wisconsin-Madison	✓	✓			✓			✓	✓	✓	✓			✓	
University of Zurich	✓	✓		✓							✓			✓	
University of North Carolina	✓	✓	✓		✓	✓		✓	✓		✓			✓	
University of Minnesota	✓	✓	✓	✓	✓					✓	✓	✓			
University of Texas	✓	✓		✓	✓										✓
TOTAL	28	25	10	21	12	8	5	10	4	6	8	4	2	4	14

Table 3 indicates that services offered by the top universities focus on faculty the most as all of them provide various services for them. In addition to faculty, graduate students, TAs and new faculty are among the audiences who are respectively offered several services. *Faculty* stands for tenure-track faculty members who have/do not have teaching duty. While the term *teaching assistant* is used to describe graduate students who have teaching duty, *graduate student* is a general term used to describe masters or doctoral students who do not necessarily teach. *New faculty* represents experienced and/or less experienced faculty members who have just started their jobs at a particular institution whereas *early-career faculty* describes faculty members who are new at their career. The term *others* refers to schools, corporations, government agencies, organizations, community partners, external institutions and residential colleges with which centers work collaboratively. The term *administrative staff* includes deans, chairs, department heads, directors, board members and committees. Although the duration of the services offered for the target audience varies, most services are offered permanently, on a regular basis and upon request.

Mission: Faculty development

According to Robertson (2010), faculty development is one of the missions that a development center can have. Written information that the web sites of the top universities contain was analyzed according to Robertson's classification and the main services aiming at the development of the faculty were identified, using Lee's (2010) categorization.

Main services

Each faculty development mission provides different main services and sub-services.

As Table 4 indicates, the main services that promote faculty development are career

support, consultations, courses, faculty learning communities, mentoring, non-degree

programs, publications, research, self-study, tutoring and workshops.

Table 4
Faculty development: Main services

Main service	Sub-service
Career Support	Resources and Personal Development Review
	Resources A-Z and Career Support Network
	Awards and Funding
	Courses and Programs for Faculty, Instructors, Internationals of Color Community
	Faculty: Tenure and Promotion
	The postdoc Development Centre
Consultations	Leadership: UNC and CFE Resources
	Research: CFE Resources
	Individual Consultation: Head TA Network for Teaching Assistants
Courses	A Course Series: Postgraduate Certificate in University Learning and Teaching
Faculty learning communities	Networks and events: educational doctorate edu network
Mentoring	How We Can Help You: Facilitating Effective Research
	Events and Opportunities: mint Program
	Events and Opportunities: Pre-Major Advising
	Resources for Mentoring
	Research Supervision: Milestones and Supervisors
	Resources A-Z for Mentoring
	Programs for Graduate Teaching Mentors
	Mentoring: Programming and Events
	Mentoring Fund for Faculty
	Mentoring: Finding a Mentor and Building Strong Mentoring Relationships
	Mentoring: How to be an effective Mentor
	Mentoring for Graduate Students: The Teaching Consultants Program
	Teaching and Mentoring Resources for Educators
Publications	Innovative Instructor: Print Series and Article Categories (Current Articles)
	Teaching: Pre-Faculty Teaching
	Resources: Pedagogical Innovations Journal Club
Research	Research Supervision: Students
	Staff Learning Scheme
	How We Can Help You: Education Research
	Library
	Current Research
	Research Opportunities on Curriculum and Pedagogy Development
	Research Supervision: Stages
	Research Supervision: Environment
	Research Supervision: Context
	Resources A-Z on Gender Equality
	Programs and Related Resources
	Research: Programming and Events
	Research: Limited Submission Awards
	Research: UNC Resources
	Research: Consultations on Research and Consultations on Tenure and Promotion
	CRLT-Engin: Engineering Education Research and Scholarship
	Research on Diversity
Self-study	Leadership: Managing Meetings
	Faculty Resources: Engaged Scholarship
Tutoring	Guides and case studies: Personal Tutoring
	Services: Fostering Graduate Student Development

Table 4 (cont'd)
Faculty development: Main services

Main service	Sub-service
Workshops	Academic Programs: Fiat Lux
	Faculty Resources: Conferences and Publications
	Graduate Professional Day for Grad Students
	Outside Consultation: Workshops on Leadership
	Workshops For Post Doctorate Researcher Mentors
	Networks and Events For New Lecturers
	Leadership: Programming and Events
	Technology Programs for Grads and Postdocs

One can infer from the table 4 that the most commonly offered main services promoting faculty development are research, mentoring and workshops whereas, faculty learning communities, courses and tutoring are the rarely offered ones by the centers.

Table 4 also presents the sub-services of each main service promoting faculty development. Research as one of the commonly offered main services aiming at faculty development has various sub-services such as informing students and faculty about research supervision and staff learning scheme. By looking at these sub-services, one can conclude that the centers mostly tend to give information about their current research practices, awards, staff learning schemes, research and its effect on tenure and promotion, to support post-docs and provide consultation on research for faculty.

Workshops are held for various purposes and one of their common purposes is to support faculty development in many ways. The sub-services of workshops aiming at faculty development show that these workshops are mostly conducted to help faculty and post-docs improve their leadership, research and technology skills as well as to

enable them grow professionally through workshops on diversity, professional day, leadership and academic programs.

The sub-services of *mentoring* aiming at professional development serve to various purposes: most of them are designed to help faculty improve their mentoring skills by offering resources and programs whereas the others serve as resources for students about building better relationships with mentors and programs for graduate mentors. One can infer from the Table 4 that mentoring is among the most commonly offered main services for faculty development and their sub-services are also the indicators of the opportunities for both faculty and students to learn more about the nature of mentoring in the institution.

Career support is another main service offered for faculty development. The sub-services show that faculty members are provided with personal development review and career support network one of the universities in particular. In addition, there are courses and programs for faculty, instructors and internationals of color community, awards and funding as well as tenure and promotion opportunities for faculty.

Consultation services as faculty development practices mostly aim to provide faculty members with the necessary information for their professional development through useful information and rich development center resources on the web site. In addition, there is one consultation service in which Head Teaching Assistants can reach a network created for their professional development.

There is only one course for faculty development, which is a *course series* called Postgraduate Certificate in University Learning and Teaching. Though this course, participants can grow as reflective practitioners as they will have the chance to build on their previous teaching and learning experiences. In this sense, this service can be associated with Schön's (1987) theory of reflection based on reflection *in* action and reflection *on* action; especially with reflection in action as participants can think ahead, analyze and critically respond to what they have experienced during this course.

Faculty learning communities is another rarely offered main service supporting faculty development. Educational Doctorate EDU Network can be seen as an informal network or a learning community where members of college staff interested in doctoral-level study can gather around common point of interest. In addition to these two main services, a non-degree program also supports faculty development. As it can be clearly seen in Table 4, engineering specific training for research students is offered so as to support researchers academically and professionally.

Publications refer to all kinds of printed or online series or journal articles offered in the center web site. The three sub-services of publication show that they offer print series, journal articles and online resources related to faculty development. One of them is a journal club which consists of publications on faculty development topics.

Self-study is another main service that promotes faculty development. Table 4 shows that there is one development center offering self-study resources for faculty development. Its sub-service indicates that they are useful resources of information

about engaged scholarship. Lastly, Table 4 indicates that tutoring is one of the uncommon services for faculty development, which intends to improve tutoring skills of graduate students, and help them learn more about being an effective personal tutor.

Mission: Instructional development

Instructional development is another core element of faculty development proposed by Robertson (2010). During the web page analysis, each page and the main services were analyzed through Lee's (2010) categorization.

Instructional development mission is the most commonly observed practice among the top twenty-eight universities analyzed in this study. All twenty-eight universities provide services enhancing instructional development.

Main services

Instructional development initiatives of each provide a number of main services and sub-services as indicated in Table 5. The main services categorized as influential factors for instructional development are awards, community service, consultations, courses, evaluation of teaching, faculty fellows, faculty learning communities, grants, instructional technology, non-degree programs, orientations, planning, self-study resources, teaching, testing-grading and workshops.

Awards

Some centers offer teaching awards and grants so as to promote teaching excellence and these initiatives are considered as ways to foster instructional development.

Table 5
Awards

Main service	Sub-Service
Awards	Grants and Awards: U-M Teaching Awards
	Grants and Awards: Provost's Third Century and Other U-M Grants
	Resources: Teaching Awards
	Graduate Student Mentoring Award
	Faculty Teaching Awards
	Provost's Teaching Awards
	Teaching Awards
	About Awards
	The University Fellows in Undergraduate Education Program
	Events and Opportunities: Award-Winning Teachers on Teaching
	Programs and Services: Customized Workshops and Retreats

Table 5 shows that eight centers provide teaching awards as well as all the details

and information for faculty members, instructors and graduate instructors. Two

centers present information about both teaching grants and awards.

Community service

Community services provide students with the opportunity to get involved with the

community they live in through various programs supported by the university. In

addition, they enable instructors and faculty members to become aware of the ways

to integrate community service into their courses.

Table 6
Community service

Main service	Sub-Service
Community Service	Faculty Resources FAQs

There is only one university practicing community service. It provides resources and

information about community service for faculty who are interested in incorporating

it into their courses.

In general, the term *consultation* refers to a set of information about a number of

teaching and learning related topics that users can access via centers' web sites.

However, there are some centers that provide individual consultation on teaching and

learning to faculty members, instructors or students on various topics. The researcher

classified both types of consultations as consultations and listed them in Table 7.

Table 7
Consultations

Main service	Sub-Service
Consultations	Teaching Resources: Reading and Composition
	Programs and Services: Departments
	Programs and Services: Faculty
	Calendar of Events
	Special Events
	Past Events
	Services: Department Programming
	Research: Learning Communities
	Individual Consultation Services: Grant-Writing Assistance
	About
	Calendar
	Consultation Services on Teaching-Related Issues for Faculty
	Technology Initiatives: Itunes U
	Technology: Tutorials on Making Active Learning Work
	Consultation Services: Research, Evaluation and Assessment
	Tutorials: Active Learning Classrooms
	Tutorials: Designing Smart Lectures
	Tutorials: Integrated Aligned Course Design
	Tutorials: Surviving Group Projects
	Individual Consultation Services: Request Student Feedback Through Consensus
	Individual Consultation and Observation
	Resources: Support for Your Students
	Programs and Services for Faculty: Individual Consultation
	Individual Consultation Services: Consulting
	Individual Consultation Services: Training
	Teaching and Learning: Individual Consultations
	Teaching: Instructional Consultations and Classroom Observations
	Using Technology: Instructional Consultations and Classroom Observations
	Teaching Consultations for Faculty
	Teaching Consultations for Post Docs
	Philosophy of Teaching Statement Consultations for Post Docs
	Teaching Demos for Graduate Students
	Philosophy of Teaching Statement Consultations for Graduate Students
	Instructional Consultations For Faculty
	Instructional Consultations and Class Visits For Graduate Student
	Workshops by Request of Faculty
	For Faculty: Departmental Visits
	Services: Consultations

As Lee (2010) points out, individual consultation is one of the oldest and still most commonly seen offerings of development centers. Website analysis results also show that consultations are among the most commonly offered main services aiming at instructional development. There are fourteen universities whose development center offer consultations as main services on topics related to instructional development (Table 7). These consultation services can be delivered in different ways; some of them are presented as a set of information on the web site that users can access anytime anywhere. Some centers, on the other hand, offer individual consultation services for instructional development.

Courses

Courses as main service are offered for fostering instructional development by some development centers (Table 8).

Table 8
Courses

Main Service	Sub-Service
Courses	Course details for Teaching Assistants
	UCL Arena: Arena Two Course
	Courses and Programs: International TA Program
	Teaching: Science Instructor Resources
	Academic Programs: Humanities Residential College

There are only five development centers offering courses to faculty and instructors for instructional development. While some of the courses are open for all instructors, the others are designed for specific groups such as teaching assistants, international teaching assistants and science instructors.

Evaluation of teaching

There are numerous theories based on the idea that one of the most effective ways of teaching improvement is the evaluation of teaching. For instance, critically reflective practice proposed by Brookfield (1998) refers to the process through which teachers become aware of their own assumptions and to relate to students' learning process. This process occurs when teachers research these assumptions through four complementary lenses: "the lens of their own autobiographies as learners of reflective practice, the lens of learners' eyes, the lens of colleagues' perceptions, and the lens of theoretical, philosophical, and research literature" (Brookfield, 1998, p.197). In this sense, teaching and learning activities at higher institutions are observed and evaluated for instructional development in various ways by enabling instructors to reflect on their teaching through these different lenses. In other words, different types of evaluation of teaching main services help instructors get useful feedback from these complementary lenses and improve their teaching skills. Table 9 below shows these services and sub-services provided.

Table 9
Evaluation of teaching

Main Service	Sub-Service
Evaluation of Teaching	Consultation: Student Evaluations
	Consultation: Mid-term Student Feedback
	Services: Early Feedback
	Individual Consultations on teaching practices
	How We Can Help You: Assessment and Evaluation
	How We Can Help You: Class Video-recording Program
	Services and Programs(Consultations)
	Teaching Resources: Evaluating Your Course
	Classroom Observation: Practice Teaching
	Pedagogy and Assessment and Peer Observation (Open Classrooms Initiative)
	TA Support: Get Feedback
	Course Profiles: Community Engaged Learning and Evaluating It
	Feedback Surveys for Faculty
	Observation and Video Services for Faculty
	Classroom Observation: Pedagogy and Assessment
	Teaching Assistants: Microteaching (Peer Observation)
	Teaching Guides: Acquiring and Using Student Feedback
	Teaching Demos for Post-docs
	Teaching Consultations for Faculty
	Course Evaluations for Faculty
	Initiatives: Thank a Teacher

Table 9 (cont'd)
Evaluation of teaching

Main Service	Sub-Service
Evaluation of Teaching	Services: Consultations as evaluation of teaching
	Classroom Observations for Faculty
	Resources: Peer Observation of Teaching
	Classroom Observations for Teaching Assistants: Observation and Video
	Classroom Observation: Resources for Early Term Assessment of Teaching
	In-Class Visits
	Teaching: Classroom Observations for New Faculty
	Course Instructor Survey
	Teaching Resources: Assessing and Improving Teaching
	Services: Q Consultations
	Teaching: Faculty Bulldog Days (Peer Observation)
	Services: Visit a Classroom and Peer Observation
	Guides and case studies: Peer dialogue on teaching

This main service is also among the most commonly offered main services. There are

fourteen centers that provide evaluation of teaching as a main service aiming at

instructional development. These evaluations occur in different forms such as peer

feedback, in class visits, course instructor surveys, classroom observations or video

observations, individual consultations, acquiring and using student feedback and

open classrooms initiatives. They all aim at providing instructors with feedback on

their teaching and help them improve their instructional skills. Some universities

provide instructors with the lens of colleagues' perceptions to critically reflect on

their practices by offering peer feedback services. In addition, some other

universities provide instructors with the lenses of learners' eyes through student

feedback services. Most of teaching evaluation related main services tend to support

critically reflective practices. Furthermore, some centers offer individual

consultations and resources for faculty and non-faculty instructors.

Faculty fellows

Only a few universities support faculty fellowship through faculty fellowship

programs or they accept individual faculty fellows for departments (Table 10).

Faculty fellows work closely with faculty members or they work on a project,

develop a program, or perform a service negotiated with the center (Lee, 2010).

Table 10
Faculty fellows

Main Service	Sub-Service
Faculty Fellows	Announcements: MTLE Fall Faculty Fellowship-apply by May 15
	Innovators: Provost's Teaching Fellows
	Grad Teaching @Stanford: Teaching Assistants

There are two centers in particular supporting faculty fellows who have teaching-

related duties. These centers support teaching fellows for spreading good university-

level teaching practices.

Faculty learning communities

Faculty learning communities (FCL) consist of eight to ten faculty members from

different disciplines who gather around a common interest for a semester or a year

(Lee, 2010). Faculty learning communities working on improving university-level

teaching and learning are categorized under instructional development mission and

listed in Table 11 with their sub-services and centers implementing.

Table 11
Faculty learning communities

Main Service	Sub-Service
Faculty Learning Communities	Diversity Scholars Pilot Program
	Designing for Learning in the 21st Century Faculty Learning Community
	Digital Stories of Curricular Innovation

The common purpose of these FCLs is to create an environment where topics related

to teaching, learning and assessment can be discussed in detail on a regular basis.

Grants

There are various ways to encourage improvement and excellence in university-level
teaching such as awards mentioned above. Grants are another example of these
incentives.

Table 12
Grants

Main Service	Sub-Service
Grants	Instructional Improvement Grants
	Lecturer Fellows Program
	Grants and Awards: Graduate Student Assessment Fellows Program
	Grants and Awards: Faculty Learning Program
	Grants and Awards: Overview
	Grants and Awards: Teaching Awards
	Grants: The NV Grants/Projects Funded by Grants to the CER
	The 2016 Rozenkranz Grants for Teaching
	Teaching Grants for Faculty
	E-learning Development Grants (ELDG)
	Innovative Teaching Grants
	Grants for Experiments in Learning Innovation
	Digital Technology Grants
	Innovators: Curriculum Innovation Grants
	Teaching and Learning Grants for Faculty
	Funding Advisement for Teaching Projects
	Grants and Awards: CRLT Grants
	Shared Governance: Neikirk Term Chair
	Services: Funding
	Book 40th!: The Bok Learning Lab
	Services: Project Development
	CRLT-Engin: Grants, Awards, Certificate

Grants is another mostly offered main service. There are sixteen university
development centers that promote instructional development through grants. These
grants are given to different groups such as lecturers, faculty members and graduate
instructors to recognize their success and promote teaching excellence. The grants
and funding are provided for various purposes such as instructional technology,
experiments in learning, teaching projects, teaching, curriculum innovation, graduate
fellowship programs, instructional improvement, lecturer fellowship programs and so
forth.

Non-degree programs

Non-degree programs refer to the set of course(s) which students take for

professional or personal enrichment. The completion of a non-degree program does

not qualify a student to have a degree. Some non-degree programs aim at

instructional development and Table 13 shows these programs together with their

sub-services and centers below.

Table 13
Non-degree programs

Main Service	Sub-Service
Non-Degree Programs	Divisional Teaching Fellows in the Humanities and Social Sciences for Post Docs
	Certificate in university Teaching for Teaching Assistants
	The Teaching Transcript
	UCL Arena: Arena Open for Teaching Assistants
	Extended programme options for Postdocs
	Programmes: Postgraduate Diploma in university Learning and Teaching
	Programmes for New Lecturers

There are mainly four university development centers offering non-degree programs.

These programs are designed for different audiences and they can be in various

formats such as certificate programs or extended programs. Two of them offer

teaching programs for post-docs, but they all provide teaching programs for teaching

assistants.

Orientations

Orientations are often held at the beginning of each year for faculty, new faculty and

graduate teaching assistants and their length varies from one-time to much longer

ones such as for an entire school year (Lee, 2010). Generally, the development

centers are responsible for planning and conducting orientations for different

audiences on a wide range of areas they may be interested. Table 14 lists orientations

aiming at instructional development.

Table 14
Orientations

Main Service	Sub-Service
Orientations	Courses and Programs: CSE: Teaching and Language Kick-off (TALK) Orientation
	TA Handbook (PDF) for Teaching Assistants
	Programs and Services: Teaching Orientations
	Orientation Programs for Faculty Fellows
	English Language Program for International Instructors
	How We Can Help You: Basics of New Faculty Orientation

There are mainly five centers offering orientations for instructional development. Some of these orientations are organized for all faculty members whereas most of them are for specific audiences such as teaching assistants, faculty fellows or international instructors. In addition, most of these orientations are held as programs whereas one of them is delivered as a detailed PDF handbook via center web site.

Planning

Planning refers to all kinds of course preparations and it plays a significant role in higher education teaching as it can be a time-consuming process in which goals and values as well as the methods in higher institution are carefully planned. Course planning requires a set of skills, time and careful elaboration and for this reason, some development centers offer a wide range of services for planning (Table 15).

Table 15
Planning

Main Service	Sub-Service
Planning	Consultation: Course Planning
	Teaching Guides: Designing Effective Writing Assignments
	Teaching Guides: Designing Problem Sets
	Key Topics on Teaching: Course Design
	Teaching Ideas: Designing Your Course
	Teaching Ideas: Large Lectures
	Tutorials: Syllabus Requirements
	Faculty Resources: Course Development

Five development centers in particular offer main services on planning courses and lectures. These services are either at consultation level, or in the form of website information available for the use of all instructors.

Self-study

During the analysis of the web sites of teaching and learning centers, the researcher encountered various self-study resources on a wide range of topics available for users. These resources usually serve as guidelines or tipsheets for mostly encountered situations during the class or general educational theories or pedagogical skills which can be useful for instructors. In addition, users have unlimited access to these sources anytime they wish (Table 16).

Table 16
Self-study

Main Service	Sub-Service
Self-Study	Resources at Other Schools
	Resources: Assessment and Evaluation
	Resources: Syllabus Design
	Resources: Course Assessment
	Resources: Classroom Dynamics and Diversity
	Resources: Leading Discussions
	Resources: Research-Based Teaching
	Resources: Professional Conduct and Mentoring
	Resources and Materials
	Teacher's Toolkit
	Guides and case studies: E-learning
	Self-Study on Teaching Resources: Teaching with Technology
	Resources: Diversity and Inclusion
	Resources and Publications
	Self-Study on Teaching Resources: Preparing to Teach
	Self-Study on Teaching Resources: Teaching Strategies
	Self-Study on Teaching Resources: Teaching Strategies
	Self-Study on Teaching Resources: Teaching Philosophies and Statements
	General Consultation: Instructional Strategies
	Programs and Services For Faculty
	CRLT-Engin: Teaching and Diversity
	Resources and Publications: Student Learning
	Self-Study on Teaching- CPET: Seminar Videos
	Resources: Photographs
	Self-Study on Planning and Teaching Courses

Table 16 (cont'd)
Self-study

Main Service	Sub-Service
Self-Study	Self-Study on Teaching Resources: Teaching for Inclusion and Diversity
	Self-Study on Teaching Resources: Books and Articles for Instructors
	Self-Study on Teaching Teaching Guides: How Students Learn
	Teaching Guides: The Role of the Course Assistant
	Teaching Guides: Your First Day of Class
	Teaching Guides: Daily Tasks in Teaching
	Teaching Guides: Accommodating Students with Disabilities
	Teaching Guides: Asking Effective Questions
	Teaching Guides: Characteristics of Effective Listening
	Teaching Guides: Planning for Small Groups
	Teaching Guides: Small Group Work
	Teaching Guides: Discussion Strategies and Trouble-Shooting
	Teaching Guides: Leading Discussion Sessions
	Teaching Guides: Leading Effective Discussions
	Key Topics on Teaching:: Discussions
	Key Topics on Teaching: Lecturing
	Key Topics on Teaching: Diversity and Inclusion
	Self-Study on Teaching For Faculty: Key Topics on Teaching
	Self-Study on Teaching Resources: Preparing to Teach
	Self-Study on Teaching Resources: Engaging students in Learning
	Self-Study on Teaching Teaching Resources: Inclusive Teaching
	Self-Study on Teaching For Faculty: The Big Class Project
	Online Resources For Graduate Students who are interested in teaching career
	For Faculty: Online Resources
	office for Online and Technology Enhanced Education For Instructors
	Educators: Getting Started-Teaching at UC San Diego
	Get Ideas: Teaching Strategies
	Self-Study on Teaching Resources: CTE Topic Overviews
	Teaching Ideas: Building Inclusive Classrooms
	Resources: Publications and Presentations
	Resources: Documenting Teaching
	Resources: Higher Ed Bibliography
	Resources: Diversity Resources
	Resources : Course offers
	Resources: Dossiers (in German)
	Resources: Posters (in German)
	Resources: Videos on Effective Teaching
	Tips on Effective Teaching and Learning
	Innovators: Online Hybrid Teaching and Learning Design Institute
	Teaching: Engagement
	Teaching: Professional Development
	Teaching: Course Design
	Teaching: Technology-Enhanced Learning
	Teaching: Flipping Your Class
	Teaching and Learning Resources for Graduate Students who are Teaching Assistants
	Writing: WR Instructor Resources
	Teaching: Ideas for Teaching
	Teaching: Using Technology
	Teaching Courses and Instructional Resources for Faculty
	Programs: Bok Center Applied Theatre Initiative
	Services: Class Video and Observation Tips
	Resources on Higher Education Lecturing
	Resources: Teaching Portfolios
	How We Can Help You: For Credit Teaching Courses

Table 16 (cont'd)
Self-study

Main Service	Sub-Service
Self-Study	How We Can Help You: Studying for Kaufman Teaching Certificate Program(KTCP) Eligibility
	How We Can Help You: Benefits of Microteaching
	Policies and Reports
	Courses: Lynda.com: playlists

Self-study is one of the mostly used services. There are nineteen development centers offering self-study resources on many teaching and learning related issues. These resources include a wide range of topics such as policies and reports, study tips for certificate programs, examples of effective teaching, using technology, e-learning, professional development on teaching, publications and presentations on teaching, diversity and inclusion in the classroom, planning, mentoring, assessment and evaluation as well as lots of key strategies for classroom management.

Self-study resources enhance self-directed learning as they consider faculty members or instructors as adult learners who are autonomous and motivated learners. As Houle identifies, they can be either goal-oriented learners, activity-oriented learners or learning-oriented learners (as cited in Candy, 2004) because their motivations may vary. In addition, online self-study resources also provide platform for Brookfield's (1998) critically reflective practice. These resources also amplify Knowles' (1970) the idea of lifelong learning by viewing instructors and faculty as adult learners who are in need of constant learning.

Teaching

There is a number of teaching main services aiming at instructional development. These teaching services include a wide range of activities from teaching resources to

seminars and programs that promote teaching mobility. Table 17 below presents

teaching as main services.

Table 17
Teaching

Main Service	Sub-Service
Teaching	TLL and R and D: Related Assessment and Evaluation Studies
	How We Can Help You: "In the Trenches" seminar series for Teaching Assistants
	How We Can Help You: Guidelines for Teaching
	How We Can Help You: Teaching Materials
	How We Can Help You: Programs and Services
	Teaching Resources: Teaching Your Course
	Teaching Resources: Designing Your Course
	Teaching Circles: Services and Programs(Communities): Quality Circles for Teaching
	Course Profiles: Blended
	Grants and Awards: Award-Winning Teachers and Their Courses
	Resources on Teaching
	Resources on Learning
	Resources: Course Preparation
	Resources: Developing Online and Blended Courses
	Resources for School of Medicine Faculty
	TA Support: Being a TA
	Course Profiles: Flipped
	Course Profiles: Lab/Field
	Course Profiles: Lecture
	Course Profiles: MOOCs
	Course Profiles: Community Engaged Learning
	Events and Opportunities: Special Teaching Opportunities
	Courses: Course List :A-Z
	Courses: Requesting a Place on a Course
	Courses: Course List: by topic
	Teach Week: Announcements
	CPET: Teaching Certificates
	Key Topics on Teaching: Classroom Policies
	Innovation: Teaching Awards
	Innovation: Teaching and Learning Symposium
	Teaching international and Multilingual Students
	Policies and Professionalism
	Teaching Resources: Information and Resources Just for Teaching Assistants (TAs)
	Programs: TA/RA Conference
	Teaching Circles: Communities: Learning Communities
	Innovation: Interactive Theater as Pedagogy Project (ITPP)
	Teaching Resources: Overview
	Structured Active In-Class Learning
	Resources: Open Online Teaching
	Course Management
	Resources: Support for Teaching
	Academic Integrity
	Teaching: Teaching Scholars and Fellows
	Teaching
	Teaching: TA Professional Development
	Teaching Ideas: Labs, Studios and Discussions
	Teaching Ideas: Engaging Students
	Programs and Services for International Teaching Assistants
	Guides and case studies: Administration
	Guides and case studies: offering Object-based learning
	Teaching Mobility: Awards and funding: Erasmus Mobility Funding
	Programmes and Events for Graduate Instructors
	Programs and Events for Faculty
	Testing and Grading Innovations in the Classroom

Table 17 (cont'd)
Teaching

Main Service	Sub-Service
Teaching	Teaching and Learning Resources
	Teaching Tools and Technological Support
	Resources: General Teaching Links
	Teaching and Learning Services
	Resources: Teaching Strategies and Materials
	Programs and Services for For Deans and Chairs
	CRLT-Players
	Consultation: Teaching Philosophies and Statements
	Consultation: Other Consultations
	Teaching Circles: Inclusive Teaching Strategies for Faculty
	Teaching Circles: Initiatives for Faculty Teaching Events
	Key Topics on Teaching: Professional Development
	Faculty Programs

Teaching is also one of the most used services. Nineteen centers provide teaching main services for instructional development and these teaching services take different shapes such as programs and services related to teaching for different audiences, teaching resources, TA support, conferences on teaching, professional development series for instructors, teaching circles, consultation services, programmes and events, teaching mobility services, guides and case studies, teaching projects, various teaching implementations such as open online teaching or structured active in class learning, events and opportunities, course management support and different course profiles.

Instructional technology

Instructional technology in higher education is one of the most effective ways for reaching success and it is seen as an integral part of any faculty development center. Even in the 1970s, the importance of the effective use of instructional technology and its hidden potential is highlighted (Bergquist & Phillips, 1975). Accordingly, there are many technology main services related to instructional development offered by the centers as listed in Table 18.

Table 18

Instructional technology

Main Service	Sub-Service
Instructional Technology	Teaching with Technology Consultation
	Teaching with Technology
	Services and Programs(Communities): Teach-Net
	Tech: Online Teaching
	Innovations Around the World
	Key Topics on Teaching: Media and Technology
	Research: Teaching with Technology
	Online Courses and Environments for Faculty
	Teaching Technologies: Services
	Teaching Technologies: Technology in the Classroom
	Teaching Technologies: Technology Ideas
	Teaching Technologies: Mission
	Teaching Technologies Spaces
	Using Technology: Technology Pilots
	Using Technology: Course Management Systems and Course Websites
	Using Technology: Interactive Learning Tools
	Using Technology: Video and Media
	Using Technology: Learning Environments
	Using Technology: Mobile Tools and Apps
	Using Technology: Online Learning
	Blackboard andEd Tech Assistance for Faculty
	Test Scanning for Faculty
	Office for Online and Technology Enhanced Education
	Get Ideas: Teaching Online
	Events: CIT Showcases
	Consultation: Get Ideas
	What's in the TLC?: Learning Technologies
	Initiatives: Faculty Teaching Events
	Innovators: MOOCs
	Initiatives: Year of Open
	Canvas LMS
	Announcements: UW Madison Canvas Information Website
	Online Learning: Teach an Online Course
	Online Learning: Develop an Online Course
	Online Learning Overview
	Online Learning
	Online Learning
	Teaching Ideas: Teaching with Technology
	Resources: CTE Videos on Vimeo
	UCL Arena: Arena Digital
	Technology
	Innovation: Technology Teaching Fellows
	Teaching and Learning: Teaching and Technology
	Resources: Instructional Tools
	Resources: Presentation Strategy
	Resources: Communication Tools
	Resources: Visual Resources

As Diaz et al. (2009) point out, today faculty members need support on many areas and technological support may be the most important areas to be developed. Teaching-learning centers as centralized services offer technological support. There are nineteen university development centers offering instructional technology as main service. These instructional technology services carry out instructional

development mission as they all aim to improve teaching and learning through
technology initiatives. These technology initiatives include a wide range of activities
such as the use of technology in classroom environment as offered by all universities
listed in Table 18, teaching with technology consultations and assistance, technology
communities such as Teach.net, online teaching services, the information about the
technology around the world, online courses and environments for faculty and
students, research projects on teaching and the use of technology, MOOCs,
instructional mobile tools and applications, faculty teaching events on technology
and teaching ideas presenting the effective use of technology. In addition to offering
these services, these centers provide users with the information about each on their
web sites.

Testing and grading

All types of assessment and services on assessment delivered to instructors or faculty
are categorized as testing and grading and listed in Table 19 below.

Table 19
Testing and grading

Main Service	Sub-Service
Testing and Grading	Individual Consultation Services: Test Scanning Services
	Teaching: Assess Learning
	Consultation: Testing and Grading
	Resources and Publications on Testing and Grading
	Programs: Assessment and Educational Research
	Resources for Grading and Feedback
	How We Can Help You: Assessment and Evaluation
	Assessment and Evaluation: Academic Programs
	Key Topics on Teaching: Assignments
	Key Topics on Teaching: Assessment of Student Learning
	Key Topics on Teaching: Grading
	Get Ideas: Assessment
	Teaching Ideas: Assessing Student Learning
	Resources: Assessment Resources
	Guides and case studies: Assessment and feedback
	Research: Assessment and Evaluation

There are about ten development centers offering testing-grading as a main service, which includes consultation services, resources for the use of instructors and faculty, academic programs, case studies and publications on assessment. Most of these centers offer useful information on their center web sites so as to inform their instructors and faculty about the assessment procedures of the institution as well as effective ways of assessment and evaluation.

Workshops

As Lee (2010) points out, workshops are among the oldest forms of services offered by the development centers and these workshops can be about anything related to university level teaching and learning. The workshops conducted for improving instructional skills of faculty and instructors support Lee's (2010) statements and they are listed in Table 20.

Table 20
Workshops

Main Service	Sub-Service
Workshops	Educators: Programs and Services
	About CET and their Workshops for Educators
	Programs for Faculty
	Research: Teaching Development
	Research: Undergraduate Learning
	Workshops for Grads and Post-docs
	How We Can Help You: DUET Seminar Series
	How We Can Help You (Programs and Services)
	How We Can Help You: EdTech Teaching Certificate Program(ETCP) Workshop
	Services and Programs (Colloquia and Workshops): Workshops on Special Topics
	Events and Opportunities: TA Events and Workshops
	Events and Opportunities: Upcoming Events
	TA Support: Grad Workshops and Events
	Programs and Related Resources: Lecturers/Teaching staff
	Teaching Conferences for Teaching Assistants
	Tech: WEST (the group)
	Workshops and Seminars: Teaching Conference (Workshop on Teaching in College)
	Workshops and Seminars: Fundamentals of Teaching
	Workshops and Seminars: Preparing Future Faculty Series
	Workshops and Seminars: Creating Assignments to Structure Your Course
	Workshops and Seminars: Collaborative Learning
	Workshops and Seminars: Technology and Collaborative Learning

Table 20 (cont'd)
Workshops

Main Service	Sub-Service
Workshops	Workshops and Seminars: Creating an Enabling Classroom Environment
	Workshops and Seminars: Philosophy of Teaching Statement
	Workshops and Seminars: Faculty Roundtable Series
	Summer Institutes on Undergraduate STEM Education for Faculty
	Workshops and Seminars: Upcoming Events
	Midwest Faculty Seminars
	Graduate Students
	Communities: Large Class Collegium
	Communities: Teaching and Learning Workshops
	Pedagogy Programs and Workshops for Faculty
	McGraw Teaching Seminar for Faculty
	Teaching Conversations in the Residential Colleges for Faculty
	Spring Teaching Forum for Faculty
	Introduction to Workshops
	A practical guide to Workshops
	Workshops for Faculty of Medicine
	Workshops by-request
	Networks and Events: Education Day
	Workshops For New Lecturers
	A practical guide to post-docs who have not yet done any teaching or are just starting on teaching
	A practical guide to post-docs who are actually doing some teaching
	Events: UCL Teaching and Learning Conference
	UCL Arena: Arena One Program
	Announcements: Teaching and Learning Symposium- May 18,19
	Courses and Programs: Innovations in Teaching Series
	Courses and Programs: Teaching Assistant Workshop Series
	Courses and Programs: Teaching Enrichment Series
	Courses and Programs: Early Career Teaching Program
	Programs and Services: Grads, Future Educators and Teaching Assistants
	Individual Consultation Workshops: Guidance and Counseling
	Teaching and Learning: Programming and Events
	Book 40th!: Bok Exploratory Seminars
	Book 40th!: The Bok Assessment Seminar
	Events and Workshops Calendar
	Services and Programs: Professional Enrichment Menu of Opportunities
	Programs and Services: Seminar Series
	CRLT-Engine: Overview
	CRLT-Engine: Orientation Programs and Workshops

Nearly all of the centers offer workshops, forums and seminars for instructional development. Workshops offered by the centers are highly rich in content and they are conducted for various audiences. These workshops can be one time or on a regular basis such as roundtable series. In addition to workshops on teaching and learning, some centers offer workshops on request. Most of the workshops are for instructors and faculty members whereas there are some workshops are conducted for teaching assistants, graduate students, post-docs and new faculty.

Overall, the results of this section show that consultations, instructional technology, self-study resources, teaching, evaluation of teaching and workshops are among the most commonly offered main services aiming at instructional development whereas community service and credit workshop are the ones that are rarely offered by the centers for instructional development purposes.

Mission: Organizational development

One of the four essential parts of a faculty development center as Robertson (2010) proposes is organizational development. The faculty development center web pages were analyzed according to his classification and main services, and sub-services, were identified using Lee's (2010) categorization. There are twenty-seven universities explicitly claiming they focus on the mission of organizational development.

Main services

Each organizational development mission provides different main service and sub-services. The main services that can be categorized under organizational development are listed in Table 21.

Table 21
Organizational development and main services

Main Service	Sub-Service
Career Support	Employment
	About Job Opportunities
Community-Campus Partnerships	Community Partnerships: Non-Profit Organizations
	Community Partnerships: Government Agencies
	Community Partnerships: Corporations
	Community Partnerships: FAQs
	Tech: Tablets
	Partners
	About Us: Professional Cooperation
Consultation	About People
	Bok Center Classrooms
	Center History

Table 21 (cont'd)
Organizational development and main services

Main Service	Sub-Service
Consultation	Services and Programs(Consultations): Program Level Consultations
	Campus Policies
	Library Resources A-Z
	About Us
	CPET: Events Calendar
	CPET Library Collection
	Get Involved
	People
	Useful Information
	Past Events
	Home
	About
	Engaging LA
	Center Spotlight
	Shared Governance: College Faculty Executive Committee (FEC)
	About: Mission
	About: News
	About: Team
	About: Contact
	About: Job Opportunities at the Center
	Teaching at Columbia
	About the CTL: Center for Teaching and Learning Services
	About the CTL: CTL Staff
	About the CTL: Visit the CTL
	About the CTL: Contact Us
	Calendar of Events
	About McGraw: Overview
	About McGraw: Teaching and Learning Staff at Frist
	About McGraw: English Language Program Staff
	About McGraw: Faculty Council on Teaching and Learning
	About McGraw: McGraw Faculty Fellows
	About McGraw: McGraw Graduate Teaching Fellows
	About McGraw: McGraw Student Advisory Council
	About Harold McGraw, Jr.
	Contact Us
	For Graduate Student: Overview
	Overview for Undergraduates
	By Request Academic Strategies Programming
	English Language Program Overview
	ELP Calendar of Classes and Tests
	English Language Program: FAQs
	English Language Program: Contact Us
	Mid-Career Fellowship Resources
	Mid-Career Fellowship: What Fellows are Saying About the MCFP
	Mid-Career Fellowship: Campus Representatives at Participating Colleges
	Profile: Overview
	Profile: CTL Staff
	CTL Staff Events
	Contact CTL Staff
	About Us: Message from the CTL Director
	About Us: People
	Our Centres and Programming
	CTL Ambassadors
	Contact Information
	Scholarly Activity
	Workshops: Book Online
	Workshops Calendar
	For New Lecturers: Contact Us
	For New Lecturers: Subscribe to the EDU newsletter

Table 21 (cont'd)
Organizational development and main services

Main Service	Sub-Service
	For research students: Contact the EDU
	Consultancy
	About Directors and Staff
	Events for Educators
	Information about CEL for Students
	FAQs for Students
	Events for Students
	Office for Online and Technology Enhanced Education
	Partners
	Contact Information
	About Mission and Goals
	Staff
	Year in Progress
	Getting to CIT
	Events: My Events
	Events: List View
	Home
	About CTE Mission
	About CTE Staff
	About Advisory Board
	About Menschel Fellows
	About CTE Fellows
	Contact Us
	Home
	Events: UCL Arena Events
	Connected Curriculum: Key People
	UCL Arena Fellows
Consultation	Strategy and Priorities: Education Strategy 2016-21
	Student Surveys: Information for Students
	Student Surveys: Information for Staff
	Support
	Home
	What's in the TLC?: Technology Classrooms
	What's in the TLC?: Kanbar Simulation Center
	What's in the TLC?: Computer Labs and Help Desk
	About: Fast Facts
	Programs Calendar
	People
	Mission and History
	Partners
	Community
	Contact
	Home
	Committees and Councils
	Vice Provost Programs: Continuing Studies
	Vice Provost Programs: Enrollment Management
	Vice Provost Programs: Equity- Diversity and Educational Achievement
	Vice Provost Programs: Faculty and Staff
	Vice Provost Programs: Information Technology and CIO
	Vice Provost Programs: Libraries and university Librarian
	Vice Provost Programs: Teaching and Learning
	About Us: Team
	Selection of Teaching Staff
	Mission Statement
	Our Homepage
	Events: Keynote at Lunchtime (in German)
	About Us: Mission and History
	About Us: Staff and Contact
	About Us: Advisory Board
	About Us: Youtube Channel
	About Us: Faculty Success Stories
	Contact Us

Table 21 (cont'd)
Organizational development and main services

Main Service	Sub-Service
Consultation	About CEI
	Staff
	Connect with CEI
	New CEI Director
	Events
	Services: Vendor Management
	Events
	Mid-Career Fellowship: Current and Recent Fellows
	Consultation: Call-us
	Programs and Services
	Research: Consulting
	About: Consultation for Others
	Initiatives and Events
	About TLL
	Programs and Related Resources for Academic Leaders
	Contact Us
	Resources and Publications: Training GSIs
	Resources and Publications: CRLT Occasional Papers and Other Publications
	Resources and Publications: Evaluation of Teaching
	CRLT-Engin: Request a Service
	Resources A-Z: Coaching
	By Request Academic Strategies Programming for Undergraduates
	Services and Programs(Communities): Berkeley Teaching Blog
Course	Faculty: The College
Donation	About: Make a Gift
Engagement in National Projects	Outreach: Educational Outreach (public site)
Faculty Learning Communities	Services and Programs(Communities): Mash-up of Academic Partners (MUAP)
Management of Grant-Funded Projects	Outreach: Grant Writing Support
	Outreach: Program Evaluation
Orientations	Outreach: Minors
Publications	The Online Bok Blog and Online Publications
	Teaching Talks: Series of Blog Posts
	Innovation: CTL Blog: At the Center
	Teaching Resources: CTL Bulletins on Teaching and Learning
	Mid-Career Fellowship: Seminar Papers and Yearbook
	Teaching Technologies: ECT Q and A Blog
	Showcase
	Publications
	CTL Annual Reports
	Annual Report
	Educators
	Publications
	Newsletter
	Blog
	News
	Japanese Prints in the TLC
	Searle Center Library Print-Available Resources
	Announcements
	About Us: Publications (in German)
	Presentations
Speeches	Networks and Events: Perspectives in Education
Instructional Technology	Tech: Academic Media Technologies
Workshops	Programs and Workshops for Academic Leaders
	Programs and Workshops for Administrators and Managers
	Programs and Workshops for Support Staff
	Programs and Workshops for Women
	Programs and Workshops on Managing Yourself

Table 21 (cont'd)
Organizational development and main services

Main Service	Sub-Service
Workshops	Public Seminar Archive
	List of Workshops
	STAR Framework (STAR introductory workshop)
	STAR Framework (STAR pre-submission workshop)
	For Postdocs: The Imperial STAR Framework
	Programmes: Supporting Learning and Teaching Pathway Workshop Series

Table 21 demonstrates that the main services that contribute to organizational development are career support, community-campus partnerships, consultations, donation, engagement in national projects, faculty learning communities, management of grant-funded projects, instructional technology, orientations, publications, speeches and workshops. The main services of organizational development offered in the centers the most are consultation, publications and workshops whereas speeches, donation and engagement in national projects are the rarely offered main services by the centers. Any kind of written information related to the faculty development center as a whole organization is considered as contributing factors to its organizational growth and named after consultation. This is the reason why almost every center has consultation as main service in data analysis.

All of the centers provide some information about how the center runs, its organizational schema, mission statement, staff, services and programs, history and so forth on their web sites. Such information is categorized as consultation, which is the most frequently used main service, as users can consult on the web site about anything they wish. Most of the centers offer information about the center itself and the staff through links called *about us, people* or *staff*. The centers of these universities also provide contact information, history and mission statements via web sites. In addition, some centers offer detailed information about the programs and

services, campus policies, events calendar, past events, news, resources, message of the director, lists of workshops, list of partners, strategy and priorities, committees and councils, information about the selection of teaching staff and advisory board. All this information contributes to the organizational growth of the center as they make the center look an official and systematical organization via the professionally designed web site.

Publications are among the other most commonly offered main services. The term *publication* refers to either printed or online documents created as publications of annual reports, newsletters, showcases, announcements, presentations, print-available resources, bulletins on teaching and learning, news or programs offered by the centers. Among the common ones are series of blogs or blog posts and print-available publications.

Workshops whose contents contribute to the organizational growth of the centers are categorized under organizational development mission. These workshops are mostly open for people who do not necessarily work at these specific institutions such as all academic leaders, administrators and managers, support staff, women or people who wish to learn more about self-management. In addition, some workshop series for faculty as well as post-docs and instructors are also introduced on the web sites. All these workshops aiming at organizational development also supports the Candy's (2004) assumptions of life-long learning as such workshops offered by the development centers are responsible for providing constant support for lifelong learning for various audiences.

Career support refers to the job opportunities for working in the development centers that are advertised on the web site. There are only two centers having job advertisements on the web site. For that reason, it can be considered as a rarely offered main service aiming at organizational development.

Community-campus partnerships refer to the strong and sustainable relationships between universities and community organizations so as to ensure mutual benefit of all counterparts. Development centers play a vital role by initiating these relationships. For example, one of the universities in particular provides the list of government agencies, corporations as well as a FAQs list on their web site so as to inform the audiences. Similarly, a couple of other universities have partners that they are in a professional cooperation. Although the other development centers may initiate such partnerships, these centers are the ones that give detailed information on their web sites that anyone interested can get informed.

The funding of a development center may depend on several things, sometimes *donations*. There is only one development center that explicitly encourages people to donate on the center via a web page segment.

Engagement in *national projects* is related to grant-funded projects and participation in national projects will improve the visibility of the institution and the status of the center on its own campus (Lee, 2010). Thus, the involvement of the center in such projects can be considered as a great contribution to the organizational recognition and growth of the center. There is only one center offering this service, which shows that engagement in national projects is rarely offered through such services.

There is only one *faculty learning community* aiming at organizational development called; it is a network of communication and collaboration amongst the staff units on campus who strive to reach excellence in teaching and learning. In addition, it aims to explore potential areas for collaboration and conduits for publicizing the work of units. However, it is among the rarely offered main services with organizational development purposes.

Grants are provided for various reasons. The management of grant-funded projects is held by some development centers; it is one of the rarely offered main services. It aim is to develop strong educational outreach components for grant proposals as well as to support program evaluation for grant reporting and program improvement.

Orientations, one of the rarely offered main services, can be designed for different purposes for different audiences. One of the centers in particular offers orientations for faculty, staff, students, volunteers and others who are working with Minors, including procedures for programs directed at Minors who are not matriculated students,. They serve a wide range of information and guidelines as well as forms related to Minors.

Another rarely offered service seems to be *speeches.* One center in particular hosts several *speeches* on perspectives in education and they are all considered as speeches aiming at organizational development in that these they are open for all participants and this contributes to the organizational improvement of the center.

As for *instructional technology*, it does not only aim at improving instructional competence of instructors, but also at the organizational improvement of an institution through its development center. Three centers offer instructional technology as a main service aiming at organizational development through academic media technologies or an online platform called Principedia.

<div align="center">**Mission: Curricular development**</div>

The last element that Robertson (2010) mentions as the core of faculty development centers is curricular development. There are seven centers in particular aiming at this mission.

Main services

Through the analysis of the main services related to curriculum development, the same procedures and categories as faculty development, instructional development and organizational development are followed. The results are listed in Table 22.

Table 22

Curricular development and main services

Main Service	Sub-Service
Community-Campus Partnerships	Outreach: Connections
	Outreach: Outreach Coordinators
Consultation	Services: Instructional Support Services Teams
Faculty Learning Communities	Connected Curriculum: FAQs, Challenges and Solutions
	Connected Curriculum: Learn More
	Connected Curriculum: Resources
	Connected Curriculum: Curriculum Inspirations
	Guides and case studies: Internationalisation of the Curriculum
	Awards and Funding: ChangeMakers
	Events: Connected Curriculum Opportunities
	Services and Programs(Communities): STEM Curriculum Working Group
	Services: Fellowships
	Connected Curriculum: Get Involved
Grants	Grants and Awards: Presidential Chair Fellows Program
	Grants and Awards: Advising Council Fellows Program
Self-study	Shared Governance: Diversity Committees
Workshops	Research: STEM Education Workshops

As Table 22 shows, the main services that promote curriculum development are community-campus partnerships, consultations, faculty learning communities, grants, self-study and workshops.

Community-campus partnerships are significant so as to promote mutual benefit between all stakeholders.

Consultation services can be delivered not only for instructional purposes, but also various purposes such as course support or curriculum support for new courses.

Faculty learning communities (FCL) work on the practices intended to design, evaluate, contextualize and implement curriculum. For instance, the studies of one university in particular include connected curriculum, FAQs, challenges and solutions found on the web site, resources of connected curriculum, curriculum inspirations, guides and case studies as well as internationalization of the curriculum, a community aiming at collaboration and innovation to enhance the university's learning experience and STEM Curriculum Working Group. Although they focus on different parts of the curriculum, the main purpose of these FCLs is to contribute to the development of the curriculum.

Some universities offer *grants* and *awards* for curriculum development for better assessment practices or working on core areas of the undergraduate curriculum for a better change.

Some universities provide *self-study resources* for curriculum development and its improvement. These include a set of information, guide and resources for faculty, who would like to propose a course for diversity credit or who are looking for new resources to design or develop a diversity-integrated course.

One university in particular offers STEM Education *workshops* so as to foster curriculum development.

By looking at Table 22, one can conclude that *faculty learning communities* are the most commonly offered main service aiming at curriculum development.

Mission: Others

Academic and professional development of students

Through the analysis of services provided on the web sites of faculty development centers, the researcher encountered some services that do not fall within the categories proposed by Robertson (2010). None of these four development types fully embodies what these services offer, i.e. all kinds of initiatives designed to help undergraduate students grow professionally and acquire essential skills for academic excellence. The term *professional development* is used to express services providing undergraduate students and graduate students who do not have teaching duty at the university with the opportunity to improve themselves professionally through activities such as community service, career support, consultation, individual consultation, course, non-degree programs, orientation programs, workshops and self-study resources. *Academic development* refers a wide range of practices whose

main goal is to enable students to obtain the academic skills they need to survive in

the higher education and excel academically afterwards.

There are about fifteen universities which aim at the mission of academic and

professional development for graduate and graduate students.

Main services

Teaching and learning center web sites of the fifteen universities were analysed

based on the services designed for academic and professional development as shown

in Table 23.

Table 23
Others (Academic and professional development of students) and main services

Main Service	Sub-Service
Career Support	Academic Programs: Entrepreneurship
	Academic Programs: ASPIRE Lab
	Tutorials: Writing a Teaching Philosophy
	Services: Spoken English Test for Teaching Assistants (SETTA)
	Graduate Student Programs
	Teaching Opportunities at Stanford
	Assistant in Instruction Opportunities
	Programs for Grads and Postdocs (Opportunities at Searle)
Community Service	Undergraduate Programs: Internship Courses
	Undergraduate Programs. Civic Engagement Minor
	Undergraduate Programs: Service Learning Courses
	Undergraduate Programs: Jumpstart
	Undergraduate Programs: Justice Corps
	Undergraduate Programs: FAQs
	Academic Programs: Freshman Clusters
	Undergraduate Programs: Astin Scholars Program
	Academic Programs: Civic Engagement Minor
	Academic Programs: Disability Studies
	Service Learning and Outreach
Consultations	Services: Student Testing Services
	Individual Consultation: Undergraduate Academic Resource Portal
	Individual Tutoring: Humanities and Social Sciences
	Individual Tutoring: Writing
	Individual Tutoring: Quantitative Reasoning and Science
	Vice Provost Programs: Student Life
	Resources for Students
	Individual Consultation: Learning Strategies and Consultations for Undergraduates
	Individual Consultation: Graduate Writing Support for Graduate Students

Table 23 (cont'd)
Others (Academic and professional development of students) and main services

Main Service	Sub-Service
Courses	Shared Governance: GE Governance Committee
	Guides and case studies: Skills/Personal and Professional Development (PPD) Teaching
	Course Support
	What Students Should Know
	Shared Governance: Writing II Committee
	Academic Programs: Undergraduate Student Initiated Education
	Academic Programs: Philanthropy Lab
	Academic Programs: Social Thoughts
	CTL's Credit Courses
	Programs and Services: Credit Teaching Courses
Credit Workshop	Students: TA Support
	GPS Credit Workshops for Graduate Students
Degree Programs	Vice Provost Programs: International Division
	Programmes: Med in university Learning and Teaching
Faculty Fellows	Programs for Grads and Postdocs (Graduate Teaching Fellows)
	CCT Fellows Program
Instructional Technology	Course Support
	Engaged Learning Tools (ELTs) for Undergraduates
	Online Innovations
	Principedia for Undergraduates
Non-degree programs	Mentoring Programs for Undergraduates
	McGraw Tutoring Program for Undergraduates
	Engineering specific training for Research Students
	Grads and Postdocs (Teaching Certificate Program)
Orientations	English Language Program: Testing and Placement
	English Language Program: Continuing Support
	English Language Program: Courses and Services
	Programs for International Assistant Instructors
	Programs for International AIs for Graduate Student
	Programs: International Teaching Assistant Program
	Students: Announcements of Programs and Services for Students
	Programs and Services for Graduate Students and Post-docs
	Research Supervision: Students
Research	Guides and case studies: Research-based education
Self-Study	Writing: Using Sources
	Writing: Undergraduate Writing
	Writing: Graduate and Professional Writing
	Graduate School GTA Training Resources for Researchers
	Online Resources for Undergraduates
Teaching	Guides and case studies: Peer-assisted learning
Tutoring	Writing: How to Tutor
	The Writing Centre for Undergraduates
	English Language Development Centre for Undergraduates
	Maths and Stats Learning Centre for Students
Workshops	Academic Strategies Workshop Series for Undergraduates
	Presentation Skills support for Students
	Workshop on Teaching in the College for Graduate Students
	Pedagogy and Professional Development Workshops For Graduate Students

As Table 23 shows, main services aiming at academic and professional development

for students are career support, community service, consultations, courses, credit

workshop, degree programs, instructional technology, faculty fellows, non-degree programs, orientations, research, self-study, teaching, tutoring and workshops.

The main services being offered the most are community service, consultations and courses whereas teaching, mentoring, non-degree programs and grants are rarely offered ones. There are various academic programs for undergraduate students involving community service. There are internship courses, civic engagement minor, service learning courses, *Jumpstart, JusticeCorps, Freshman Clusters, Astin Scholars Program, Civic Engagement Minor, Academic Program for Disability Students*. In addition, one of the universities offers service learning and outreach for undergraduates. All these programs aim to enable students to get involved in the community by working in various environments, experiencing and gaining first-hand experience.

Career support is another most commonly offered main service aiming at academic and professional development for students. Some centers provide students with career opportunities as well as programs that will enable them to improve themselves professionally for their future careers. Some others offer teaching and assistantship opportunities.

Consultations are offered to students in various areas such as academic writing support, testing services, individual tutoring on quantitative reasoning and science, student life, orientation resources, and learning strategies.

Graduate and undergraduate *courses* offered by the centers vary in content. They are about personal and professional development in the form of course support, academic writing, social thoughts, undergraduate student initiated education and some credit courses. These courses aim at providing the support students may need when they get accustomed to student life or start a career after graduation.

Credit workshops aim at improving professional and academic skills of students by enabling them to earn credits, and they are categorized as credit courses aiming at academic and professional development for students.

Degree programs allow participants to earn an educational degree by completion.

Graduate teaching fellows offers programs for graduate students and post-docs, and fellows are also responsible for being a part of curriculum studies.

Instructional technology is important not only for instructors or faculty, but also for students in higher education. One of the universities offers course support on technology for students where students who have difficulty in getting used to using technology tools. Some others offer online innovation programs that students can join.

Mentoring programs for undergraduate students provide opportunities for senior students to practice their teaching and mentoring skills, and for freshmen to get accustomed to academic life. For example, *McGraw Tutoring Program for Undergraduates* provides platform for learning the basics of mentoring for seniors

and being supported academically for freshmen at the same time. Since there are only two development centers offering this service, it is one of the rarely offered main services aiming at professional and academic development for students.

Orientations as main services aiming at professional and academic development for students are usually provided through English Language Programs, international students, testing and placement, continuing support, courses and services for students who speak English as a foreign language.

Undergraduate students are encouraged to participate in research *projects* as well. One of the universities offers guidelines and case studies on research-based education, and makes students part of it.

Development centers offer lots of *self-study* resources on many topics for various audiences. There are some resources designed for students such as teaching how to use resources, undergraduate writing, graduate and professional writing, graduate teaching assistantship training and resources for researchers and online resources for undergraduates. These resources can be highly beneficial and practical for students for some reasons: firstly, they can have quick and easy access to all kinds of information they look for on center web sites and secondly; they would learn best when they are in an environment they feel at ease as Knowles (1970) proposes. *Teaching* as a main service aiming at academic and professional development is about peer-assisted learning. The reason why this service is labeled as teaching is that it provides students with the opportunity to learn by teaching.

Tutoring consists of the sub-services such as the writing aid, writing centers, English Language Centre for students and Maths and Stats Learning Centre for Students. Through these tutoring sessions, it is intended to improve students' specific learning needs.

Some *workshops* are open for all students including undergraduates. For example, one university in particular offers workshop series for undergraduates. In addition, there are workshops on teaching at college level for graduate students, pedagogy and professional development workshops for graduate students and international teaching assistants.

It can be concluded from Table 23 that the most commonly offered services with the aim of promoting academic and professional development of students are career support, community service, consultations, courses and orientations.

Purposes

As the next step, each mission is sorted by the main service and the purpose each holds so that what each particular service carries out what mission and serves what kind of developmental purposes can be analyzed and understood clearly. To these ends, the purpose and mission of each main service are demonstrated through a qualitative typology of purposes.

Faculty development

Through the second round analysis, the researcher focuses on the purposes of main services whose mission is faculty development. The purposes of each of these main

services were analyzed so as to provide a deeper understanding of each main service and their aims.

Career support

Through the analysis of main services provided by the development centers, it has been found that each *career support* service carries out various missions and purposes.

Table 24
Career support

Main Service	Purpose(s)
Career Support	to offer support to departments and individuals in introducing **professional development review schemes** to suit their needs and based on principles agreed by the university's Personnel Committee.
	to provide **a network** that will be helping anyone who is a member of administrative or support staff up to grade 8 in the university (including academic-related staff and colleges) and who is looking for confidential, impartial advice about **an internal job application or a job interview or with rewriting their CVs.**
	to **inform** faculty about New Teaching Assistants Workshop leaders, graduate teaching mentors, graduate teaching fellows, Searle teaching-as-research program, graduate associate
	to give **information** about **tenure and promotion** rules and process through several links.
	to invite faculty and instructors interested in discussing strategies about how the cultural identities of faculty of color and those from international backgrounds inform their professional lives and **to provide grants for their academic studies** (The Faculty, Instructors, Internationals of Color Community)
	to **offer development opportunities** to maximise the potential of Imperial postdocs and fellows through the Post-Doc Development Center

The term *career support* reflects all kinds of assistance and mentoring for the faculty to shape their academic career and find their career path. As can be seen in Table 24, the services offered as career support include professional development review schemes for departments and individuals, a network for an internal job application or a job interview or with rewriting CVs, offering development opportunities through the Post-Doc Development Center, informing faculty or assistants about career development programs as well as tenure and promotion procedures and offering financial aid to color community for their academic studies. All these services show that career and professional development of faculty and instructors are encouraged through development schemes, networks, informative documents on the web site,

several development programs and grants. These initiatives also support Candy's

(2004) theory of self-directed learning which is based on the assumption of lifelong

learning in that faculty can choose to get a professional assistance on career

development through these career support services.

Consultations

Consultation as a main service promotes faculty development in many ways. These

consultation services and their purposes are listed in Table 25.

Table 25
Consultations

Main Service	Purpose(s)
Consultatios	to **provide links** for office of human resources, institute for the arts and humanities, school of medicine, libraries, system
	to **provide links for online handouts** on pocket guide for **leadership** skills, leading people through change, managing challenging interactions, tips on managing a meeting or leading a committee, good to great
	to **help faculty understand pre-award and post-award grants management on sponsored research**. Responsible Conduct of Research. A brief guide to the various components of responsible conduct of research (RCR).
	to **support faculty** on several topics such as being proactive, efficient, and effective, organizing elements of the course, leading groups of TAs, Managing TA meetings, Effective grading in large courses, and professional development.

Consultation is a general term used to describe all written information and

documents about a specific topic that users can access any time they wish. In the

context of faculty development, it refers to all kinds of information that enables

faculty members to improve themselves professionally. Table 25 demonstrates that

consultation main services include web links on several topics, information on pre-

award and post-award grant management on sponsored research and faculty support

on self-management so as to promote professional development. It can be inferred

that the purposes of these consultation services within the context of faculty

development are providing users with the quick access opportunity on faculty and

professional development-related areas.

Courses

The content of *courses* may vary greatly. The researcher encountered that there is a course designed specifically for faculty development. Its purposes are listed below.

Table 26

Courses

Main Service	Purpose(s)
Course	to offer a **practice-centered flexible course**, the PG Cert, which develops participants as reflective practitioners and builds on the introductory workshops and participants' previous experience
	to **give information on application and programme content, course prerequisites, timetable, resources on the web site.**

Table 26 shows that the PG Cert is a practice-centered flexible course for post-docs who are interested in university level teaching so that they can develop as reflective practitioners. In addition, there is information on application procedure, programme content, course prerequisites, timetable and useful resources for the course. The purpose of this course is to provide post-docs with the opportunity to build on their current pedagogical expertise and instructional skills, which is in line with Mezirow's transformative learning theory. As Mezirow (1997) puts forward, adult learning occurs when they are able to transfer new knowledge to their existing frame of reference that enables them to understand their experiences. Thus, it can be claimed that the purposes of this course support the theory.

Faculty learning communities

Faculty development practices and the main services were analyzed and the results are illustrated in Table 27.

Table 27

Faculty learning communities

Main Service	Purpose(s)
Faculty Learning Communities	to **provide an online platform** called EDEN (**E**ducational **D**octorate **EDU N**etwork), which is an informal, peer support network for members of College staff interested or engaged in doctoral-level study in Education (through registration for an EdD or PhD at another university)

Table 27 indicates that there is one faculty learning communities service whose purposes are in accordance with faculty development mission. Faculty members gather around a focal point of concern, which is doctoral-level study in education, on an online platform and they can exchange information. Faculty learning communities who work on a common point of interest can be defined as either goal-oriented learners or learning-oriented learners as proposed by Houle (as cited in Candy, 2004) since they share a common goal, to pursue a doctorate-level study and see learning as an ongoing process.

Mentoring

There are different types of main services specifically designed to be a fruitful resource not only to faculty members and graduate instructors/assistants who have the responsibility of mentoring, but also to students who look for information about finding the right mentor or building strong relationships with the mentor. Table 28 illustrates the mentoring main services aiming faculty development.

Table 28
Mentoring

Main Service	Purpose(s)
Mentoring	to **help graduate students and post-docs** develop skills in **mentoring undergraduate researchers.**
	to provide the **faculty newsletter** article link about the mentoring program
	to **equip teaching mentors** with the **skills, resources, and content knowledge** necessary to be most effective.
	to **provide links** for Teaching Mentor role, MinT Fellows, MinT Training and Support, MinT **Resources**
	to **inform faculty** about what pre-major **advising** at Stanford is, advising partnerships, advising in action, advisor spotlight and application process.
	to **serve as resources of** mentoring such as general mentoring resources, mentoring TAs and Mentors in Teaching Program
	to **provide links** for new supervisors, experienced supervisors, co-supervision, improving their supervisory practice, supervisory styles, graduate admissions, being an examiner, student-supervisor relationships, giving and receiving feedback, understanding reasons for delay, monitoring student progress, avoiding potential difficulties, ideas and tools and insights from research and literature
	to help faculty members to learn **transfer and confirmation status**, **preparing** students for **examination**, selecting examiners, the viva, the outcomes
	to **coordinate and support a range of mentoring** schemes within the collegiate university through The Learning Institute. These schemes vary according to their purpose and context

Table 28 (cont'd)
Mentoring

Main Service	Purpose(s)
Mentoring	to **introduce mentoring programs** such as Ad Feminam, Springboard, Postgraduate Diploma in Teaching and Learning in Higher Education, New Academics, Leaders and Managers, Contact Info, Related links, Documents
	to gain a unique context to further their pedagogical development by **mentoring their peers** in the Teaching Certificate Program (TCP).
	to **provide information about mentoring series**, workshops for faculty mentors, mentees, and mentoring program designers
	to provide opportunities for **finding a mentor**, building strong mentoring relationships, benefits of having a mentor, tips for mentees
	to provide **materials designed to help faculty to be an effective mentor** and to provide contact information for group consultation
	to **provide early career faculty access to experienced peer consultants** for guidance and support in their important roles as teachers
	to **provide assistance to graduate students** who wish to be mentors
	to **serve as resources** for teaching and mentoring resources under three headings: teaching strategies, CIRTL network, education research and literature

Table 28 presents all mentoring main services offered by the centers. The purposes of these mentoring vary in content such as *skills development, schemes and programs, resources and links and peer mentoring*. Some programs are designed to help faculty develop their mentoring skills by equipping teaching mentors with the skills, resources, and content knowledge necessary to be most effective and helping graduate students and post-docs develop skills in mentoring undergraduate researchers. In addition, mentoring schemes and programs are introduced in detail via center web sites. There are also a number of resources and links to provide assistance to mentors and mentees. Lastly, peer mentoring or peer consultants services are provided for early career faculty.

One can infer that the purposes of mentoring are to provide all necessary information about the process of mentoring not only to faculty members, but also to students and mentoring program designers.

Publications

The researcher uses the term *publication* for published documents about teaching and learning activities such as online published books about teaching, journal articles about teaching and online forums where articles on teaching excellence can be found. Publication services aiming at instructional development are listed in Table 29.

Table 29
Publications

Main Service	Purpose(s)
Publications	to **increase communication** about effective teaching solutions and how to achieve them. Through the articles, instructors can share successful teaching strategies, learn what colleagues are doing, and discover new technologies and skills for the classroom or professional development. (The Innovative Instructor forum)
	to **list article categories**
	to **list an online-published book** which consists of seven chapters about the basics of teaching
	to present the list of journal articles

Publications as a main service include the innovative instructor forum to increase communication about teaching problems and effective solutions, listing article categories, listing an online-published book about basics of teaching and listing the journal articles. These online publications enable instructors to learn more about the theoretical framework of teaching and learning in an easy way and this provides instructors, or in other words, reflective practitioners to use the lens of theoretical, philosophical, and research literature so as to gain new knowledge and adjust their framework accordingly as Brookfield (1998) suggests.

Research

Research signifies all kinds of works by faculty member or a graduate student on their subject area such as working on a project, publishing, grant writing or pursuing a higher degree. In addition, the services designed to be a source for staff learning scheme, research-related guidance, mentoring graduate students on their research

process are also categorized as research as they are directly related to research. Table

30 shows research services aiming at faculty development.

Table 30
Research

Main Service	Purpose(s)
Research	to **give information** about student motivation to study, clarifying the expectations, thinking about academic and other careers, **identifying and developing skills, varied conceptions of research, defining the research topic, doing research/inquiry, integrity and ethical practice, reading and writing, presenting seminars at conferences, publishing during doctorate, writing your thesis** (for post-graduate researchers)
	to **inform** about infrastructure and resources as well as **intellectual climate**
	to **list the purpose of the doctorate, trends in doctoral education and research into doctoral education**
	to **present various resources** provided by the Learning Institute for general use, including self-directed learning resources and initiatives that support staff learning, many of which have been developed based on the experience shared by colleagues in the university.
	to **enable advanced research on gender, culture and development**. The Equality Challenge Unit promotes equality and diversity in higher education and has materials on gender on its website.& Three online courses: unconscious bias, equality and diversity, undergraduate admissions
	to **provide information on clinical trial investigator series (CTIS),** principal investigator development series, faculty mentoring, summer writing group program, grant writing
	to **serve as a resource** for the growing number of students, faculty, and researchers community both **interested in and currently contributing to educational.** to **connect initiatives** to each other and to **inform the community about relevant advances in the field.**
	to **give information about Blossoms Projec**t, which refer to Maths and Science Video lessons for high school students
	to **inform users about Comparative Media Studies**
	to **list the articles and conference papers, working papers and an educational research agenda for digital learning**
	to **inform** the faculty about **the latest curriculum and pedagogy development initiatives**
	to **offer TLL Library database for research**
	to **give links to Rackham Certificate, Poster Fair, Engineering Education Research Resources, Assessment and Evaluation Support, Journals, Investigating Student Learning Grant**
	to **list FAQs about limited submission awards**
	to **compile a list of resources** across campus that offer **research-related guidance**, services, and opportunities for faculty.
	to **provide a separate web site specific for supervisors and doctoral students**, as well as interesting information for colleagues who work alongside doctoral candidates, who mentor them or help **to support their research**.
	to **provide one-on-one consultations** to assist and postdocs with **their specific research-related needs.**
	to **assist faculty members on doing research** through Research Staff Society, Research Staff Working Group, Staff gateway, Support for researchers, The Careers Service and Vitae
	to **list grants, publications and presentations for all diversity projects**

Research as main service serves to a number of purposes and various audiences.

Some of these services aim at *providing information* about research-related topics for

faculty and doctorate students and post-doctoral researchers by listing information.

Others serve as *resources* so as to offer research-related guidance, services, and

opportunities for faculty, inform the faculty about the latest curriculum and pedagogy

development initiatives, serve as a resource for the growing number of students, faculty, and researchers in the university community both interested in and currently contributing to educational, present various resources provided by the Learning Institute for general use, including self-directed learning resources and initiatives that support staff learning, many of which have been developed based on the experience shared by colleagues in the university.

Some purposes show that these services also aim at fostering *research* at the university through assisting faculty members on doing research, providing one-on-one consultations to assist and postdocs with their specific research-related needs, and connecting initiatives to each other and to inform the community about relevant advances in the field. In addition, some services are offered as library databases available for the use of faculty and students.

Self-study

Self-study is a general term which is used for all kinds of information and/or resources available for user access. Self-study resources enable users to study on any topic they need. Table 31 presents self-study resources aiming at faculty development.

Table 31
Self-study

Main Service	Purpose(s)
Self-study	**to encourage** faculty and students **to collaborate with community partners on research projects** **to offer library database**
	to share tips on managing a meeting or chairing a committee

As the Table 31 shows, the main purposes of self-study resources carrying out faculty development mission are to encourage faculty to do research through library

database or to share tips on managing a meeting or chairing a committee through online documents. This kind of self-study resources provide users with the opportunity to have quick-access to information they need and therefore, they learn when they feel at ease as Knowles (1970) proposes his adult learning theory.

Tutoring

Morillas and Garrido (2014) define tutoring as "an important part of the university teaching-learning process designed to improve student success rates and to enable students to achieve their professional goals" (p.90). The researcher encounters tutoring services that are carried out by different groups; some tutoring services are delivered by graduate mentors or even undergraduate mentors whereas the ones given by faculty mentors are listed below.

Table 32
Tutoring

Main Service	Purpose(s)
Tutoring	to **present information** about **personal tutoring**
	to **offer services** that enable **faculty to gain mentoring skills, especially mentoring graduate students**

Table 32 lists the purposes of mentoring services aiming at faculty development. One of them presents information about personal tutoring and details for faculty mentors and the other one offers services enabling faculty to gain mentoring skills especially about being a mentor of a graduate student. Both of them provide faculty members with the opportunity to gain necessary skills for being a mentor.

Workshops

Workshop is among the services that Lee (2010) mentions as one of the most common services offered in development centers. It is a single event or series of

events on various topics related to teaching and learning (Lee, 2010). Below is Table

33 which demonstrates workshops as main service.

Table 33
Workshops

Main Service	Purpose(s)
Workshops	to **support researchers** across the university for their professional and career development **through workshops**
	to **offer a day-long event** with seminars and a panel discussion that aim **to better prepare TA's for competitive job market.**
	to **provide a link to A practical guide to assisting with PhD supervision** which is specifically designed for postdocs who are not the main PhD supervisor, but nonetheless find they have a part to play in supervision.
	to **offer strategy and leadership, seminar series for early career faculty development and core skills program for faculty leaderships**
	to **offer workshop series** on MOOC-Centered Learning Community, mentored discussions of teaching, position opening: postdoctoral fellow.
	to **present conferences, publication and workshops** on higher education teaching
	to **offer up to 200 seminars annually through the *Fiat Lux* Freshman Seminar Program**. These seminars provide students and faculty with small group settings to engage in meaningful discussions on a range of topics.
	to enlist following information for students: courses and enrollment deadlines, FAQ, for faculty: submission deadlines and application process, faculty advisory committee, Chancellor's Research Award, Annual Faculty Reception, Current Donors, Giving, News and Media, Archive and Contact Info
	to provide a variety of consultation services for faculty leaders and their faculty units. These services include customized leadership presentations for faculty groups, consulting and advising services, **faculty retreat and workshop facilitation**
	to offer workshops, education day, perspectives in education, educational doctorate EDU network

As shown in Table 33, there are many centers offering workshops and seminars for

faculty development and they share similar purposes; workshops or workshop series,

seminars or a variety of consultation services on facilitating workshops are

conducted so that faculty members or sometimes students can improve themselves as

researchers, leaders, teachers or workshop facilitators. In addition, there are

workshops aiming at supporting teaching assistants on their professional and career

development as well as preparing them for the competitive job market.

Instructional development

The second round data analysis represent that the main services whose mission is

instructional development serve to specific purposes. The tables illustrate the results

of instructional development, its main services and purposes of these main services below.

Awards

Through data analysis, the researcher encounters some services that informs faculty about special higher education awards, eligibility and the selection process of them. Table 34 shows the awards services aiming at instructional development and their purposes.

Table 34
Awards

Main Service	Purpose(s)
Awards	to **value good teaching** and **to list several teaching prizes and awards** specific to different schools, colleges, and programs and the central administrative awards at U-M.
	to **recognize excellence in teaching** among faculty, instructors, mentors, and teaching assistants in institute-wide and discipline-specific
	to **honor faculty members** who are exemplary in supporting the development of their graduate students as teachers, scholars, and professionals
	to **give information** about Associate and Full Professors Teaching Award Recipients, Assistant Professors and Lecturers Teaching Award Recipients, Unit 1 Course Instructors and Unit 3 Sessional Instructors Award Recipients, Teaching Assistant and Sessional Instructional Assistants Awards Recipients
	to **offer Provost's Teaching Awards** and **list the previous winners** of Provost's Teaching Awards
	to honor original, specific innovations to improve student learning, not instructor's overall teaching excellence by a prize sponsored by the office of the Provost, CRLT, and the university Library.
	to **inform faculty about goals, award, eligibility, nominations, selection criteria, selection process and timing.**
	to **support and recognize the accomplishments of faculty and staff in teaching and learning through** Faculty Distinguished Teaching Awards, Teaching Academy Fellowship and Awards, Awards for Mentoring Undergraduates, Academic Staff Excellence Awards
	to **promote creative thinking among students and faculty**, and to **develop programs that will intensify student learning experiences in and beyond the classroom through several grants** to **provide detailed descriptions** about them.
	to provide links to Certificate of Distinction and Excellence, Derek C. Bok Award, Other Fas Teaching Awards
	to **recognize faculty for extraordinary contributions to undergraduate education**, including faculty from the graduate and professional schools through university Fellows Program.
	to **give information about** the Vice Provost for Teaching and Learning's longest-running lecture series, **Award-Winning Teachers on Teaching**. The series has invited faculty winners of major teaching awards to deliver a lecture on a teaching topic of their choice.
	to **offer videos of award winning teachers**
	to provide **grants to fund the retreats and to implement plans to improve teaching and learning that develop from such events**

Table 34 indicates that the main purpose of all awards main services is to recognize and value good teaching examples and innovations in teaching and learning (described as to value good teaching, to recognize excellence in teaching, to honor

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faculty members, to honor original, specific innovations to improve students

learning, to support and recognize the accomplishments of faculty and staff in

learning and teaching, to promote creative thinking and to recognize faculty for

extraordinary contributions to undergraduate education) as well as informing faculty

and instructors about the procedures, goals, awards and eligibility (described as to

give information, to inform faculty, to provide detailed descriptions, to provide links,

to give information, to offer videos). In addition, grants to fund the retreats are

provided "to implement plans to improve teaching and learning that develop from

such events.

By looking at the purposes, one can conclude that these awards or grants are not only

provided for evaluating the overall performance of instructors, but also for

exemplary contributions or innovations in teaching and learning.

Community service

Community services enable students to get involved with the community they live in

through various programs supported by the university. There is one community

service whose aim is to improve instructional development as can be seen in Table

35.

Table 35
Community services

Main Service	Purpose(s)
Community Service	to **provide information to faculty members who are interested in community learning**

This community service aims at instructional development by providing faculty

members who work in these programs with community-service related information

and information on how to guide students through community learning journey. It

can be inferred from the Table 35 that community service is a rare main service

offered by the centers for instructional development.

Consultations

There are various consultation main services with the mission of instructional

development in the development centers. Here is the list of these services.

Table 36
Consultations

Main Service	Purpose(s)
Consultations	to **provide consultation on design** Reading and Composition (R and C) Course, Teaching R and C Course, Teaching Argumentative Writing, Resources for Non-Native English Speakers, Handbooks and Web Resources
	to **visit departments to discuss teaching topics** of special interest to faculty members, and to provide an overview of the center's wide range of teaching resources to **join a regularly scheduled faculty meeting or a lunch discussion in departments** to **invite departments to hold a faculty meeting**
	to **provide instructors with information that can help them know how to assist students with diverse needs** **to offer academic advising contacts, and general support services** to **offer academic support on technology and research**
	to **provide tailored programs and services** designed to suit **faculty's needs and save time.** to **offer departments consultations** on any aspect of teaching or student learning.
	to **offer faculty programming and services** including: individual support, seminars, workshops and other opportunities, institutes, junior faculty inSPIRE program, grants, annual conference: A celebration of teaching excellence at Cornell to **offer services for departments**, such as customized workshops and consultations.
	to **sort events** by target audience
	to **list** special events
	to **list** past events
	to **work with departments to create customized workshops and program consultations** to **offer a department programming request form**
	to **provide consulting for faculty and graduate student instructors** in three professional areas: teaching, assessment, and technology
	to **provide information** about mentoring fund, application form, contact information for consultation and departmental teaching conversations
	to **provide some recommendations** for implementing active learning in classroom.
	to **collect audio, video and educational course materials from schools, departments, libraries and other programs across the university** on Itunes: getting started, course manager, creating album artwork
	to **explore the nature and effects of educational technology used** to **provide free advice and assistance** to instructors and support staff.
	to **provide information, advice, examples of best practices, and inspiration** to those using or thinking about using the exciting and challenging learning environments known as "Active Learning Classrooms" (ALCs).
	to **provide resources through links** about planning lectures, delivering lectures, evaluating lectures, resources and credits
	to **inform about integrated aligned course design**
	to **inform about surviving group projects**
	to **support** graduate instructors' **pedagogical, academic, and professional progress**.
	to **set up a one-on-one consultation** and **a workshop for a department or group on campus**
	to **inform about** the possible topics for **individual consultation.**

Table 36 (cont'd)
Consultations

Main Service	Purpose(s)
Consultations	**to provide confidential feedbac**k on teaching with an Individual Teaching Consultation for new and experienced faculty.
	to **provide opportunity to discuss with peers teaching strategies** in relation to your course's learning goals.
	to **provide consultation** on creating a teaching statement
	to demonstrate a complete **list of grants, publications, and presentations related to Learning Communities research.**
	to **provide feedback** on **teaching demos** by teaching staff
	to **offer individual consultation** on creating a teaching statement
	to **respond to requests concerning teaching, course design and student learning**. These **non-evaluative consultations** may address any number of topics, including but not limited to: preparing a syllabus; trying out new approaches or techniques in lecture, lab, or precept; or improving classroom dynamics.
	to **provide individual consultation on request.**
	to **observe a lecture, lab or precept and provide confidential, constructive feedback**. to **provide individual consultation sessions** regarding classroom observations on request.
	to **design workshop or teaching discussion in home department** lead by McGraw
	to **offer several training and development options** for faculty interested in learning more about instructional technologies: scheduled workshops and events, open office hours and office visits, custom training sessions, consultation
	to **provide programs for instructors at all levels to support their success in teaching**.
	to **provide links** for Faculty-to Faculty Lunches, Engineering Faculty Teaching Forum, Conversations on Teaching Nursing, Teaching Seminars, SAIL, Faculty-to-Faculty Observation, Workshops by Request
	to **collect clear, actionable/constructive and confidential feedback** from students on classroom instruction or curriculum. to **gather the feedback instructors want and need.**
	to **routinely assists members of the community** with course design, section planning, effective use of technology, assignment development, mid-semester classroom observations and feedback, interpreting student evaluations, and addressing challenges in the classroom.
	to **provide individual consultation for grant writing**

Table 36 presents that the purposes of *consultation* services vary in content and format. Some of the consultation services can be held upon request for individuals or departments whereas other consultation services consist of information on various topics delivered via the centers' web sites. The purpose statements show that these consultation services fall into specific categories such as *course design, customized workshops, providing information, resources and educational materials, teaching-related topics, technology and research, assessment, resources about planning, evaluating and delivering lectures, surviving group projects, peer assistance, links to grants and publications, training and development options* and *gathering feedback.*

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Based on the purposes mentioned in Table 41 and above, these private, department or group consultations provide university community with the assistance of professionals as coaches as Schön's (1987) reflective practicum theory proposes. Through these consultations, instructors, faculty or support staff are able to critically reflect on their practices.

Consultation services serve to other purposes such as informing faculty by listing, sorting, providing necessary information on services. In other words, they inform target audience in online platforms in a quick and easy way.

Courses

There are various credit or non-credit courses whose mission is instructional development. The following table illustrates these services along with their missions and purposes.

Table 37
Courses

Main Service	Purpose(s)
Courses	to **provide weekly interactive meetings** on focused overviews and guided application of key pedagogical research, such as prior knowledge and misconceptions, novice-expert differences, and cognitive development as applied to university teaching.
	to **aim to prepare instructors to teach confidently and effectively** to enable them to develop in their teaching-related role
	to **offer training and support to non-native English speakers** who teach courses and undertake other instructional responsibilities.
	to give information on Science Education Seminar, Journal Club Series, Scientific Teaching Fellows Program, Summer Institutes for STEM, DiversiTeas, Evaluation and Research, Instructional Materials, Science Teaching and Learning Lunches
	to **bring students and faculty together in small, informal gatherings to explore how the humanities shape our world and our thinking.**
	to **provide links** to home, about, programs, joining the HRC, Faculty Affiliates, Humanities Orgs, Contact Info

As Table 37 presents, courses for instructional development consist of weekly interactive meetings on topics related to university teaching, a course series for preparing instructors to teach confidently and effectively, trainings and supports to

instructors who are non-native English speakers, general information on programs

and services offered by the center and small, informal gatherings of faculty and

students to explore how the humanities shape our world and our thinking. Detailed

information on each are provided on the center web pages with separate links.

Evaluation of teaching

Evaluation of teaching is a set of practices aiming at collecting information about

instructors' activities, accomplishments, and effectiveness in teaching and giving

constructive feedback so that the instructor maximize his/her teaching skills and the

best learning environment can occur at higher education. During the analysis process,

the researcher encounters various forms of teaching evaluation including but not

limited to using students' ratings, getting student letters, student feedback forms,

class visits by development center staff or video-recording of lectures, teaching

demos, mid-course review and individual consultation. Table 38 shows the list of

evaluation of teaching aiming at instructional development.

Table 38
Evaluation of teaching

Main Service	Purpose(s)
Evaluation of Teaching	to **provide student ratings** and to **use these ratings results for improvement or decision-making**
	to **present examples of student work** that show what students accomplished in the course
	to get student letters, solicited from the whole class by the department
	to **list online surveys**, such as SurveyMonkey, designed by individual instructors, departments or units
	to **get feedback from advisees**
	to **encourage faculty to ask students for feedback** and to **assist faculty to design the feedback form**
	to **provide "mud card" feedback sheet and "End of Semester Evaluation Form" for all departments.**
	to **provide the opportunity to have one or more of their classes video-recorded** and have the **recording reviewed with a professional teaching consultant.**
	to **demonstrate link to Documenting and Improving Teaching Effectiveness** under Teaching Resources category, to give some information about why **document and improve teaching effectiveness** and Sources and Methods for Documenting Teaching Effectiveness
	to **outline the various sources of informatio**n (i.e., students, colleagues, alumni, GSI's) **and methods employed to gather evidence of one's teaching effectiveness** (i.e., student course evaluations, peer observation of classroom teaching, alumni surveys, GSI letter)
	to **offer mid-term small group feedback session, midterm online feedback survey, Video recording and consultation**

Table 38 (cont'd)
Evaluation of teaching

Main Service	Purpose(s)
Evaluation of Teaching	to **work with faculty to** *design and deploy early feedback surveys* **for courses and sections and to provide summarized results and consult with faculty after surveys are complete.**
	to **visit lecture and recitation sections, observe, and (if desired) make a video recording for faculty and TA feedback on teaching (upon request).**
	to **consult with the instructor, provide feedback, collaborate on action plans, and give the instructor a digital copy of any video recording following the visit and/or recording.**
	to **provide information on acquiring and using student feedback**
	to provide feedback on teaching demos
	to **inform about mid-course review** and **Individual Teaching Consultation**
	to **list** important Dates and Process, UT/UTSC questions/UTSC Guidelines and Procedures, Ideas to Encourage StudenT Participation in Course Evaluations
	to **offer faculty feedback form for students.**
	to **provide mid-semester course feedback, preparing for the semester, instructor support services, syllabus support**
	to **provide services to support the end-of-semester evaluations administered in each UT course**.
	to **gather mid-term student feedback for identifying areas for instructional improvement**
	to **offer individual consultation based student feedback**
	to **offer classroom observations to identify strong points** that new TFs can rely on when starting to teach, to **name any issues that the TF will need to address before or shortly into their teaching,** and to **allow the TF to get over any initial nervousness** before they start in their real classroom or lab
	to **provide the opportunity for the course's senior staff to observe their TFs in action before classes star**t, which can provide helpful context if issues arise during the semester through classroom observation through classroom visits
	to **offer several variations of the practice teaching such as standard micro-teaching, lab microteaching, nanocoaching and online documents about what is micro teaching, teaching fellows' talk about microteaching , microteaching scenarios through classroom observation**
	to provide faculty with the opportunity of **classroom observation depending on their request.**
	to **observe faculty in action** in his class, and **meet with him to discuss any impressions**. The faculty consultant will **observe all aspects of the class**, or faculty can request that they focus on one, or a few, specific areas.& Videotaping Service is also available and Contact info
	to visit lecture and recitation sections, observe, and (if desired) make a video recording for faculty and feedback on teaching.
	to arrange for a consultant from the McGraw Center to visit a lecture, lab or precept and **provide confidential, constructive feedback.**
	to **improve the educational environment for your students through classroom observation**
	to **observe classrooms and gather student feedback t**o help faculty evaluate their work to offer links to **teaching observation, small group analysis, end-of-term focus group**.
	to welcome colleagues to observe their classes so as to **reflect on** pedagogical elements and practices that positively impacted student learning and to list peer observation guides
	to present information about **the microteaching sessions for Teaching Assistants, preparing for it and logistics**
	to **present Faculty Bulldog Days**, which is a campus-wide opportunity for Yale faculty **to attend each other's courses, experience the innovation** that goes on in our classrooms and to **become more engaged in community of scholars.**
	to **talk with other faculty about teaching and reflect on new** ideas faculty can try in their own class through The CIT's Visit a Classroom program
	to attend and observe each other's teaching sessions or **study online teaching activities**/other resources, **to discuss what's going well, where improvements could be made and create a joint development action plan, to create a peer-dialogue.**
	to **include reviews of syllabi, assignments, teaching, and professional development through the peer review of teaching process.**

Table 38 presents that evaluation of teaching services provide instructors with the

opportunity to have feedback on their teaching from experts in various ways. Some

of these ways centers use include getting student feedback through structured and

planned ways such as student ratings, student letters, "mud card feedback sheet" and

"end of semester evaluation form" for all departments, early feedback surveys and consultations on those, examples of student work, end of semester evaluations, student feedback, mid-course review and end of semester evaluations. All these student evaluations provide the instructors with the chance to reflect on their teaching through the lens of the learners as Brookfield (1998) suggests as they can use the comments and feedback of the learners so as to make a self-evaluation of their strong and less-strong points in teaching.

Another purpose of evaluation of teaching services is to offer peer-observation to instructors. to this end, some services are offered such as welcoming colleagues to observe their classes so as to reflect on pedagogical elements and practices that positively impacted student learning: peer observation for teaching assistants, presenting Faculty Bulldog Days, which is a campus-wide opportunity for Yale faculty to attend each other's courses, talking with other faculty about teaching and reflect on new idea thanks to *Visit a Classroom Program* and attending and observe each other's teaching sessions. These evaluation services give faculty and instructors the opportunity to learn from each other and share ideas through collaboration and support Brookfield's (1998) critically reflective practice which favors the lens of colleagues' perceptions for the self-discovery of the assumptions that frame how practitioners work. In other words, practitioners, or instructors can benefit from these formally designed student feedback provided by the centers so as to evaluate their own teaching through the eyes of the learners.

One of the most commonly offered teaching evaluation methods is classroom observation or video-recording of teaching activities in the classroom and a follow-up consultation session.

All these services support Schön's (1987) theory of reflection on action which is the process of analyzing the reaction to the situation deeply after the incident. Thus, since the instructors are able to analyze and discuss their teaching in detail with the assistance of an expert, he/she is able to grow professionally through reflective practice.

Faculty fellows

Faculty fellows as a main service promotes instructional development as well as faculty development as mentioned earlier. Table 39 shows the list of faculty fellows services enabling instructional development.

Table 39
Faculty fellows

Main Service	Purpose(s)
Faculty Fellows	to **promote a personalized experience** for students **by association with faculty and staff on an informal basis outside the classroom and office**
	to **provide information** about the provost's teaching fellows, meet the fellows, faculty innovation showcase, first Friday think tank, teaching tips to **pursue research and collaborate with colleague**s
	to **design program where grad students can sort the activities by both the Developmental Stage of their teaching as well as the area of Focus that they wish to develop**.

As shown in Table 39, the purposes of faculty fellow programs offered by the centers are to offer faculty fellows programs so as to promote a personalized experience for students by association with faculty and staff on an informal basis outside the classroom and office and to provide graduate students with the opportunity to sort activities by both their developmental stage of teaching and focus areas and offer

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information about the program as well as provost's teaching fellows, meet the

fellows, faculty innovation showcase, first Friday think tank and teaching tips.

Faculty learning communities

Faculty learning communities do not only promote faculty development, but also

instructional development. Their purposes are listed in table 40 below.

Table 40
Faculty learning communities

Main Service	Purpose(s)
Faculty Learning Communities	to serve as resources for other faculty members in their respective disciplines **to work on curriculum transformation and inclusive teaching (Diversity Scholars)**
	to represent a unique opportunity to learn from peers and leverage support of diverse experts in the field of teaching and learning with technology and to collaborate with the Center for Educational Innovation (CEI), Academic Technology Support Services (ATSS), the university Libraries, and the Disability Resource Center (DRC) to create a program that will be launched in the fall of 2016.
	to **lead Teaching Fellows and Peer Teaching Consultants**

Faculty learning communities as a service aiming at instructional development

consist of a group of faculty members and instructors who work on teaching and

learning related topics as described in Table 40. They work on curriculum

transformation and inclusive teaching through Diversity Scholars, they aim to

represent an opportunity to learn from peers through collaboration with the Center

for Educational Innovation (CEI), Academic Technology Support Services (ATSS),

the university Libraries, and the Disability Resource Center (DRC) to create a

program and they lead Teaching Fellows and Peer Teaching Consultants. It can be

concluded that these communities share a common purpose: improving teaching and

learning as well as curriculum through collaborating with other departments and

working as a team.

Grants

Lee (2010) asserts that grants usually "support an aspect of course or curriculum development, including the purchase of materials such as educational software, partial support of a graduate student, travel to a teaching-related conference, payment of an external consultant, or a working retreat for faculty" (p.27). Below is the list of grants as main services that encourages instructional development.

Table 41
Grants

Main Service	Purpose(s)
Grants	to **provide funds** (up to $3,000) for small-scale **projects to improve existing courses, develop new courses, evaluate instruction, and assess curricular needs** to **support larger innovative projects that will directly and significantly affect teaching and learning**, such as **developing materials for new and existing courses and developing new modes of instruction.**
	to **encourage projects that respond to changes in education**: for instance, projects that involve **service learning** and **civic engagement**, that enhance diversity, that encourage study groups, that **promote active learning and engagement**, that **focus on speaking or writing skills**, or that seek **to improve classroom assessment.**
	to provide information about **Towner Prize, Rackham Certificate, Investigating Student Learning Grant, Other CRLT Grants**
	to **provide non-ladder faculty** with an exceptional opportunity to work in teams to build teaching and learning tools, templates, and resources for both their individual courses and the entire campus community by **offering them grants**.
	to **provide links** to past teaching grants recipients and **sample grant proposal** and learn about **Teaching grants and Grant Expense Guidelines**
	to **reflect the emphasis put on effective teaching**, these teaching awards are given out each year on campus at the university-wide and the School level and by student groups.
	to **provide links** to university Fellows in Undergraduate Education, Allan Cox Medal for Faculty Excellence Fostering Undergraduate Research, Hoagland Award Fund for Innovations in Undergraduate Education, Centennial Teaching Assistant Awards, Walter J. Gores Award, Lloyd W. Dinkelspiel Award, ASSU Teaching Awards, Phi Beta Kappa Teaching Prize, Dr. St. Clair Drake Award for Outstanding Teaching, Asian American Center Faculty Award, School-Specific Teaching Awards
	to **list information about** grants and projects
	to **seek proposals** for the Rosenkranz Grants for Pedagogical Advancement from all faculty, ladder and non-ladder, who would like **to design and develop new digital course materials or experiment with new teaching models and technologies.**
	to **provide information about current grants** and **guidelines** for how to apply it
	to **enhance student learning** to **allow individual or small groups of teaching or support staff to work, in conjunction with student**s, to further the use of learning technology in a module or programme
	to **provide information** about alumnae Award for Curriculum Development, Student/Faculty Interaction Grants, Searle Innovative Teaching Grant
	to **support innovative undergraduate teaching and learning at the course or curricular leve**l. to **provide substantial financial and staff support** to **design, deliver, and measure the impact of novel approaches** faculty, P and A instructors, and academic leaders.
	to **have transformational enhancement of the curricula and pedagogy through the leveraging of existing or emerging digital technologies.**
	to **provide FAQs, 2014 curriculum innovation grantees**
	to **list handouts** for CFE 100+ Grants Program, CFE Teaching in the professions (TIP) Grants Program, Finish Line Project and CFE Grants Program, Faculty Peer visits program, interactive classrooms, CFE Publications and Videos, UNC Resources, teaching and learning organizations, CFE publication and **presentation grants**
	to **advise faculty on the development of proposals for support of projects** that advance innovative teaching and learning in the Princeton classroom and beyond and resources

Table 41 (cont'd)
Grants

Main Service	Purpose(s)
Grants	to **supplement graduate preparation** by offering opportunities to gain training in assessment of undergraduate student learning and evaluation of educational programs on the Berkeley campus
	to **get in depth understanding of assessment practices in higher education, knowledge and strategies to articulate learning outcomes**, application of use and user-driven principles to design and implement program level assessment, ability to analyze and interpret qualitative and/or quantitative data, ability to report assessment data in digestible ways
	to **improve undergraduate student outcomes in STEM.**
	to **build STEM education expertise, supporting STEM faculty in developing their teaching practice, engaging STEM faculty in habits of reflection, nurturing a tradition of continued learning about teaching practice**
	to **enhance teaching and learning with the information about the names of the grant**s, due dates and max.grant amounts and link to other funding resources.
	to **honor a professor or associate professor with an appointment in one of the donor-identified fields**—classics, comparative literature, English, European languages, history, or philosophy—who has a distinguished record of teaching in Freshman Clusters or Honors Collegium (The Neikirk Term Chair)
	to **provide links to home and Selection Process and Contact Info**
	to **list Handout for grants**
	to **house and incubate faculty-driven projects related to teaching and learning**.
	to present information about project development, design research methodology, partnerships and grant opportunities

Grants and funds are provided for supporting development on many areas of
university teaching and learning. As can be seen in purposes listed in Table 41, they
can be given for small-scale projects to improve existing courses, develop new
courses, evaluate instruction, and assess curricular needs, larger projects that directly
affects teaching and learning, yearly awards for on campus at the university-wide and
the School level and by student groups, large projects on changes in education such
as projects that involve service learning and civic engagement. In addition, some
grants and awards are provided for individuals; grants for non-ladder faculty to
encourage them to work on building teaching tools, allowing individual or small
groups of teaching or support staff to work, in conjunction with students, to further
the use of learning technology in a module or programme, provide substantial
financial and staff support to design, deliver, and measure the impact of novel
approaches by faculty, instructors, and academic leaders, grants for STEM education,
grants for designing and developing new digital course materials or experiment with

new teaching models and technologies, supporting innovative teaching and learning and fostering enhancement in curricula through grant support.

Non-degree programs

Non-degree programs offered in the selected development centers have multiple missions. The ones having instructional development mission are listed in Table 42.

Table 42
Non-degree programs

Main Service	Purpose(s)
Non-Degree Programs	to **enhance the pedagogical skills and extend research training for recent graduates of PhD programs in the Humanities or Social Sciences** through the Divisional Teaching Fellows Program
	to **list certificate information and requirements**
	to **provide** Princeton graduate students and postdoctoral researchers opportunities to **develop as self-reflective teachers through the Teaching Transcript Program**
	to **offer non-degree programs advancing research-based educatio**n at UCL.
	to **offer information about fellowship program**
	to **provide Supporting Learning and Teaching Pathway and postgraduate Certificate** in university Learning and Teaching programs

Non-degree programs consist of certificate or teaching fellows programs for post-docs who want to pursue a teaching career in higher education. By looking at the purposes of the services, one can conclude that non degree programs are delivered as *Teaching Fellow Programs* for recent graduates of PhD, *certificate programs, teaching transcript programs* and *resources of information.* To this end, they aim to enhance the pedagogical skills and extend research training for recent graduates of PhD programs in the Humanities or Social Sciences, list certificate information and requirements, provide graduate students and postdoctoral researchers opportunities to develop as self-reflective teachers through the Teaching Transcript Program, offer non-degree programs advancing research-based education, offer information about fellowship program, and provide Supporting Learning and Teaching Pathway and postgraduate Certificate in university Learning and Teaching programs. Thus, it can

be claimed that these non-degree programs provided by the development centers

enable future instructors to gain unique instructional and research skills through

certificate or non-certificate programs.

Orientations

Content and audience of orientations held by the centers vary from teaching

assistants, international assistants to newly appointed professors. Table 43 lists the

orientations of the selected centers aiming at instructional development.

Table 43
Orientations

Main Service	Purpose(s)
Orientations	to **provide new ladder-rank faculty** with **the knowledge, tools, and inspiration to achieve high expectations for teaching excellence** while benefiting from becoming part of a cohort of peers across many disciplines (The year-long Teaching Excellence Colloquium (TEC)
	to **provide links to the resources important for new faculty** such as **resources for new faculty, teaching excellence colloquium, individual consultation, campus connections, new faculty teaching newsletter, teach-net mailings list**
	to **provide** information about **the TA Orientation details** and alternative options for those who could not attend the orientation to **offer handouts for getting started as a successful TA**, Handouts from the 2014 TA Orientation as well as the university policies
	to **design, implement, assist with, and evaluate programs that prepare new TAs for their teaching role**s and **support all TA**s as they carry out their teaching responsibilities.
	to **provide links to university policies, logistics, teaching resources, funding sources for instructors, grants**
	to **provide Teaching Orientation for new TAs**
	to **give calendar and Descriptions of Training Sessions**
	to **publish e-News as an orientation** for **new faculty**
	to **accompany and counsel assistant- and newly appointed professors** during a two-year period at the beginning of their academic career , the program aims to **support and assist them in their new role as university teacher**s, and **facilitate cooperation among colleagues** who find themselves in similar academic teaching and leadership positions.
	to **provide a teaching and learning forum in which participants** engage with a multidisciplinary, cross-cultural mix of doctoral candidates and post-doctoral fellows. Participants **discuss learning theory and strategies, develop teaching skills, create classroom and job search materials, and work with faculty from a range of institutional types.**
	to provide **new faculty members** with an opportunity to **learn about the many resources and services available on campus to support teaching and student learning:** new faculty symposium-2015, highlights from NFS-2014(Symposium)
	to **provide links to various topics for consultation** such as **Apply** for an Advanced TA Position, **ask peer or mentor** to observe teaching, **attend an educational conference, attend TA meetings within their department, attend TA department orientation, create a development plan , creating teaching portfolio, CTL Courses for Credit etc.**
	to **help graduate students prepare for their roles and responsibilities as new TAs as well as provide an opportunity to develop strategies for effective practices in their discipline**. Through three workshops, new TAs work with an experience graduate student, either an NTAC Workshop Leader or Graduate Teaching Fellow, to learn about specific skills and critical issues.
	to **list upcoming orientations and workshops about teaching**
	to **provide separate links for new faculty orientation, educator exchange-workshop series, consult with an expert teacher, Instructional Skills Workshop(ISW)**
	to **provide the list of courses, workshops and course**
	to **provide orientation for new faculty**

Table 43 (cont'd)
Orientations

Main Service	Purpose(s)
Orientations	to **provide orientations to new Teaching Assistants** about meeting in small groups with students, leading discussions and problem solving sessions, teaching labs, consulting with students in office hours, grading and assisting in the design and delivery of courses.&FAQs.
	to **provide detailed information about Blackboard 9 with documents, support contacts, training sessions information**
	to **conduct training sessions, both for first-contract TAs and for TAs with responsibilities to lead tutorials.** **to conduct workshops for TAs.**
	to **help non-native English speaking instructors improve their language and cultural awareness in order to teach effectively in the US** to **help departments screen graduate students** who have been proposed to work as teaching assistants, to **support the wider university community** by helping faculty and staff respond to the increasing cultural and linguistic diversity on campus and to foster a productive learning environment for all students.
	to **provide a PDF resource handbook for TAs** including some topics such as welcoming the new role, teaching and learning, practical advice for specific TA duties, getting feedback, balancing time commitments for teaching and research, teaching and your cv, Honor, Code of Ethics, responsible conduct of research, institute policies and campus resources for TAs
	to **help new faculty and GSIs learn about students, find the resources they need to be successful, and begin to develop a community of colleagues.**
	to **orient new faculty to the university campus community**. The Program is facilitated by a number of campus educators, including those that have received campus-wide teaching awards.(The Faculty Fellows Program)
	to provide orientation to new faculty after one week mandatory online course.
	to **help faculty think strategically about teaching, learn more about active learning and interactive teaching, and talk with other faculty about teaching.**

Table 43 shows that orientation services for instructional development are mostly held for teaching assistants, international teaching assistants, new faculty who have just started teaching at a particular university or for early-career faculty. Orientation services are delivered through several forms. These are *colloquiums for new ladder rank faculty, links, resources and handouts for policies and university environment for new faculty, TA Orientation Programs, Teaching Orientations for TAs, training sessions, counseling programs for newly appointed professors, teaching and learning forums for doctoral candidates and post-doctoral fellows, symposiums for new faculty, workshops and courses, cultural orientation and language support for international TAs* and *mandatory online courses for new faculty.*

Development centers support and assist early-career faculty in their new role as university teachers, and facilitate cooperation among colleagues who find themselves

in similar academic teaching and leadership positions. In addition, some online

documents and resources about the policies, procedures, assessment and teaching in

particular institution are also available on the center web sites.

Planning

Development centers offer some services for helping instructors prepare lesson plans,

design syllabus and incorporate innovative elements into their courses. The purposes

of these services are listed in Table 44.

Table 44

Planning

Main Service	Purpose(s)
Planning	to provide information to faculty members who are interested in **community learning**
	to **determine possible changes in the course** to assist students in learning through small group method and survey methods
	to **incorporate technology into a course plan**
	to **develop clearly stated goals** for student learning
	to **develop methods for assessing student learning**
	to prepare a learner-centered syllabus
	to **design innovative teaching strategies**
	to **incorporate student feedback into course plan**
	to **infuse multicultural content into a course**
	to present handouts on **designing effective writing assignments**
	to **offer effective writing strategies to help prepare assignments.**
	to present information about **course design**
	to offer links for setting learning outcomes, **writing a syllabus**, **flipping the classroom, incorporating diversity, universal design, academic integrity, working with TAs, the first day of class, student evaluations, course re-design**
	getting started with large lectures, teaching and learning in large lectures and **technology in large lectures**
	to offer guidelines for **designing a course syllabus and links to the information specific to the course and policy statements**

Table 44 presents the purposes of planning services offered by the centers. Planning

services are provided for instructors under specific categories such *as course re-*

design in the form of incorporating innovative elements (student feedback,

multicultural content, technology, diversity, universal design and academic

integrity) into course, *developing clearly stated lesson objectives and goals,*

assessment methods, effective writing assessments, preparing learner-centered

syllabus, teaching strategies, flipping the classroom , providing links and resources
and *use of technology in large lectures.*

Self-study

Self-study resources are among the most commonly offered main services for

instructional development and their purposes vary in content as shown in Table 45.

Table 45
Self-study

Main Service	Purpose(s)
Self-Study	to provide **online resources for faculty, graduate students, undergraduates and print library**
	to show **links to the teaching and learning center web pages of other schools**
	to list a range of **online resources** that **define inclusive teaching** and providing specific strategies for practicing it.
	to **provide information** about **assessment and evaluation activities** ranging from **macro-level data about student experiences to departmental materials used in select, individual courses such as curriculum design, collecting assessment data, planning for curricular assessment, CRLT Assessment Services, Recent CRLT Assessment and Evaluation Publications, Evaluating and Online Learning Tool**
	to show the **basics of active learning and examples of active-learning initiatives within and beyond Harvard** and additional Resources on teaching with active learning
	to give additional links **to active learning pedagogies, activity-based learning, ABL Connect, Materials and Course Examples, Summer Institute on Undergraduate Education in Science and Engineering**
	to present handouts **for future faculty fellowship program, workshops, new TA orientation**
	to inform about **the function and components of a syllabus, examples of syllabus and tipsheets**
	to share tips for **assessing the course** and links for more information
	to **demonstrate blended learning report** (a set of four individual feedback reports to provide course instructors and teaching staff with information to inform future iterations of hybrid courses.)
	Providing a detailed **overview of classroom dynamics and diversity, a book recommendation, tipsheets**
	to give **discussion tips, offering books about it and tipsheets**
	to list **a selection of practical, on-line references that the Center recommends for the teacher interested in research-based pedagogy**.
	to list **research on learnin**g (Student Success in College and Sleep and Learning)
	to show **Overview, resources and GSA Report**
	to show a list of materials**: tip sheets, books and journals, videos, Bok Center Library**
	to **integrate tips, tutorials, and referral information to assist faculty** in their role as educators through the Teacher's Toolkit
	to provide links to **e-learning tools: Moodle, lecturecast, electronic voting systems, turnitin, myportfolio, web-conferencing, open educational resources**
	to **explore how to create online opportunities to keep students engaged and learning together** through links to the big picture, facilitating engagement, evaluation and research, assessment best practices, learning module design, Longhorn Learning Model
	to provide useful links for **integrating technology into classroom** such as: getting started, choosing your technology, U-M IT Support, U-M Faculty Examples, Flipping Your Class, U-M Distance Learning Programs
	to provide useful links for getting prepared to teaching such as **course design and planning, syllabus design, first days of class, strategies for effective lesson planning, creating inclusive classrooms, choosing your technology, GSI guidebook**
	to provide **resources to support excellent, innovative instruction in a variety of teaching settings**
	to provide links to **more general resources addressing effective teaching principles and techniques** (general resources, engaged learning, teaching challenges, teaching context and their sub-categories.)
	to show the links of **some articles about teaching philosophies and statements, teaching portfolios and course portfolios.**
	to **show recorded talks about online teaching and learning at Caltech**

Table 45 (cont'd)
Self-study

Main Service	Purpose(s)
Self-Study	to **offer seminar video links** and **TA seminar video links** and **TA Training Video Links**
	to **list resources on planning and teaching**
	to list self-study resources under the following categories: **understanding diverse students' perspectives, before teaching, during classes.**
	to **offer key publications summarize recent developments in university Science, Technology, Engineering, and Mathematics (STEM) education and are available to read or download for free**
	to **provide information about how students learn through a detailed overview of learning theories**
	to offer **guidelines and Information for Teaching Assistants**
	to **offer guidelines and Information about the first day of class**
	to list the basics of **good classroom management, logistics, and built-in daily reflection on the teaching process.**
	to inform about **basic Guidelines of dealing with disabled students**
	to offer guidelines and Information about **how to ask good questions during the class**
	to offer Guidelines and Information about **the characteristics of effective listening**
	to provide information about **planning small groups**
	to list **suggestions for using small groups in the classroom**
	to list a few suggestions on **how to initiate a discussion or approach a discussion topic.**
	to offer a handout intended **for CAs/TAs leading a discussion section that is part of a class taught by another instructor. It focuses on discussion-based teaching approaches.**
	to offer a handout on **leading effective discussion**
	to give information about **discussion in the class**
	to give information about **lecturing**
	to give information about **diversity and inclusion**
	to offer a direct link to the **key topics on teaching**
	to offer separate links to **designing your course and syllabus, teaching the first day of class, teaching different types of classes, cultivating faculty and TA working relationships, assessing student learning**
	to give handouts on **flipping the classroom, employing inclusive teaching strategies, promoting student engagement through active learning, leading dynamic discussions, large lecture instruction, teaching with technology, service learning, office hours**
	to propose **strategies for inclusive teaching** and provides resources, examples and perspectives from students and faculty to help members of the teaching community teach more inclusively.
	to bring together resources and ideas to help teachers -- both faculty and graduate students -- and undergraduate learners **make the most of the large class experience.and resources as tips and guides for large classes.**
	to help **instructors handle the large class experience through resources as tips and guides**
	to offer **online resources for getting started, authorship, licensing and revenue sharing, using copyright material, resources, FAQ**
	to offer links for **course planning, course materials, teamwork, active learning, flipping the classroom, assessment**
	to provide information **on a variety of teaching topics and techniques which are restricted to members of the community via secure login.& Login system**
	to provide **links to additional information on the components and process of documenting your teaching.**
	to **list Higher Education Bibliography**
	to provide an overview of the **diversity resources the CTE offers in relation to teaching and learning**.: links to programming for faculty, programming for graduate students, future educators and TAs, resources for the classroom, diversity resources
	to provide links to **dossiers (in German), posters (in German), videos, kursmaterialien**
	to **give reasonable suggestions on how student learning in practice can be promoted or contain basics thematic priorities.**
	to **offer posters as working material to selected academic teaching subjects.**
	to **offer a few videos available in English dealing with questions about university teaching and learning.**
	to **provide** handouts for **prior knowledge, metacognition, critical thinking, Longhorn learning model**
	to **provide** handouts for **make class active, teaching large classes, make class interactive, motivate students**
	to provide information about **assessing teaching, peer review of teaching, developing teaching philosophy, creating teaching portfolio**
	to **offer** links about **professional development, publishings, mid-semester course evaluation and essays on teaching excellence**
	to offer **some resources to help instructors quickly and easily integrate writing into their regular teaching practice**
	to list handouts for **learning outcomes, application of learning, learning activities, write your syllabus**
	to demonstrate **teaching evaluation handbook, presentation materials from past CTE sessions**

Table 45 (cont'd)
Self-study

Main Service	Purpose(s)
Self-Study	to provide information about **Canvas LMS, Canvas Training Events, teaching with technology, multimedia tools**
	to provide detailed information about **flipped classroom**
	to offer helpful information about in the **classroom-tips, course design, assignment design, syllabus design, course tools/resources**
	to **provide links to course logistics, instructional technology, library, office for academic integrity, office for the prevention of harassment and discrimination, office for students with disabilities (OSD), student information, student in distress, syllabus preparation, writing center**
	to enlist different educational technology offerings with separate links for Graduate and Professional Students, Postdoctoral Fellows, Undergraduates and Staff
	to provide information **on a previous teaching workshop and materials used**
	to **offer course catalogue which includes teaching tips**
	to encourage **faculty and students to collaborate with community partners on research projects. to provide a partial list to online documents of library**
	to **provide** useful information for instructors such **as academic calendaring, course materials and activiti**es: course syllabus requirements, guidelines for holding classes and related educational activities off campus, mental health syllabus statement and safety, health and wellness.
	to **provide links related to student learning**
	to **inform faculty who wish to investigate aspects of student learning in their courses or programs about the grants and scholarships**.
	to offer a range of **online learning materials on personal and professional development topics in addition to the technical IT topics promoted by IT Services**. The entire range of resources is available to staff in the collegiate university and can be accessed through **Single Sign-On.**
	to **offer ideas and strategies** on how to **create and maintain inclusive classrooms, classroom climate, icebreakers, establishing ground rules, inclusive teaching strategies, connecting with students**
	to provide lots of self-stud guides under different headings such as: **considering teaching and learning archive, advanced discussion leading, advanced section planning, diversity in the classroom, finding advanced teaching opportunities, preparing a lecture, public speaking for teachers 1:lecturing without fear, public speaking for teachers 2: the mechanics of speaking, teaching controversial topics, teaching students to write good papers, teaching students with different learning styles and levels of preparation, using technology in section, teaching journal articles.**

As can be seen in Table 45, self-study resources serve to a number of purposes.

Although there are too many purposes listed in Table 45, most of them overlap

conceptually. For example, some of them provide *information delivery* to faculty

members and instructors in the form of guidelines, links, online resources, course

design, assessment tips, new TA orientation, future faculty fellowship program,

considering teaching and learning archive, advanced discussion leading, advanced

section planning, diversity in the classroom, finding advanced teaching opportunities,

preparing a lecture, public speaking for teachers, lecturing without fear, public

speaking for teachers, the mechanics of speaking, teaching controversial topics,

teaching students to write good papers, teaching students with different learning

styles and levels of preparation, using technology in sessions, teaching journal

article, handling with disabled students, teaching evaluation handbook, presentation materials from past CTE sessions, links, dossiers, handouts, videos and bibliography on a wide range of topics.

Some self-study resources provide instructional support in the form of active learning, blended learning, handling large/small groups, components and functions of syllabus, tipsheets, handouts for prior knowledge, metacognition, critical thinking, Longhorn learning model, how to ask good questions during the class, leading effective discussions , guidelines and Information about the characteristics of effective listening, planning small groups, suggestions for using small groups in the classroom, online teaching and learning and technology integration.

One can infer from Table 45 that the majority of self-study resources for instructional development encourage instructors to become researchers by offering them rich information sources about methodology, literature, instructional technology, institutional policies, course resources, workshops and resources. In addition, except for the technological tools that require log-in, nearly all of the resources are available not only for instructors studying at these particular institutions, but also for everyone. It can be claimed that technology has a great effect on delivering the information by providing easy and quick access for everyone.

Teaching

Services that have a direct effect on the teaching skills and classroom practices of an instructor are categorized as teaching aiming at instructional development. Table 46 shows the list of these services.

Table 46

Teaching

Main Service	Purpose(s)
	to **assist** instructors about **issues** arising in their teaching
	to offer permanent **consultancy** on teaching
	to provide **scaffolding**, Diversity, Inclusive Teaching, Multicultural, Teaching Strategies
	to **offer a variety of services** and programs for faculty who are interested in **pursuing new and innovative approaches** to teaching, want to learn more about teaching methods relevant to their courses, or want to consult about ways to improve their teaching and their students' learning.
	to **offer links** for grants for teaching, seminars, Provost's Seminars on Teaching, Orientations, Consultations, Student Feedback, Faculty Mentoring, U-M Teaching Awards, and Evaluation for Education Grants
	to **inform faculty about the issues** "Diversity and Inclusion", "effective faculty videos", "GSI teaching videos" and" journals" via links.
	to **work with academic departments** at FAS to develop ways that **the methods of theatre** can act as vehicles for maximizing effective pedagogy and classroom engagement
	to provide **information** about **videotaping and class observation** with a focus on each of their advantages and disadvantages
	to provide link to request **consultation** for **video-taping or class observation and** a tutorial of m32 loaner camera set up for video taping
	to offer links for **consultation** on **effective teaching** and **documents** about **lecturing and lecturing** tips and videos
	to help **improve the teaching skills** of doctoral students in preparation for academic careers: Teaching College Level Science, Communication Skills for Academics, Workshop in Strategies for Effective Teaching, Advances Speaking and Critical Listening
	to develop the **teaching skills** of graduate student s and post-docs
	to give information about a **teaching program**
	to offer **Microteaching workshops for novice instructors to practice their teaching** skills in a comfortable environment.and links to the guidelines of microteaching and application link
	to provide an overview of **each study**. Permission to post **each Fact Sheet onlin**e has been received from the faculty member or principal investigator who led the project.
Teaching	to provide links to **learning goals, syllabus, textbook affordability**
	to **cover the implementation and execution of teaching and learning activities**.
	to **offer links to Gallery Walk, DTA Award Ceremonies, Nomination Guidelines and Procedures, Give to the DTA Endowment**
	to describe examples of great teaching and learning in different modes, including candid reflections on lessons learned through a blended course
	to provide information **about awards for best teaching practices offered in the country**
	to offer links **to asking for letters of recommendation, develop a mentor relationship**
	to provide information about **planning approach, teaching strategies, student-teacher communication, small groups and discussions, evaluating your teaching, evaluating students**
	to provide information about **tutoring and learning support for students, promoting active learning, learning activities, learning matters**
	to **offer individual consultation, course preparation handbook, course design aids, creating a syllabus, writing learning goals**
	to **support the development of projects** that serve as catalysts for effective and inspiring transformations in **face-to-face, online, and blended learning**, and that have broad impact at the university and beyond.
	to offer links "**Getting Started with Vice Provost for Teaching and Learning**", "**Innovation Initiatives**", "**Digital Learning**", "**Digital Learning Seed Grants, Faculty College, Course Design Institute**
	to offer links for **SceMERI Faculty Development and Faculty Development Center for Medical Teachers**
	to offer a **complete listings of courses** provided by the Institute or organised through the Institute.
	to enlist **materials and courses grouped into the themed playlists** below for instructors
	to offer links to **project management essentials, difficult conversations, assertiveness, presentation skills, working with challenging behaviour**
	to offer **contact information for reservation and the requirement**s list
	to host **TeachWeek,** which is a campus-wide celebration of teaching and learning, featuring conversations with faculty, students, staff, and renown guest presenters.
	to offer links to **open classes, workshops about teaching and learning**
	to give information about **programs which awards for an attendance certificate**
	to give FAQs about the **two certification programmes**
	to provide **teaching tips**
	to present **handouts on teaching awards** (nominations, important dates, awards, award information)
	to provide **a forum** where all who share this interest can learn of their colleagues' work and engage in discussion. The event includes **a keynote talk and two poster sessions.** Posters presented each year range from classroom/action research to published research.
	to **offer an overview of information about teaching students, including links to resources for additional instructor and student support**.

Table 46 (cont'd)

Teaching

Main Service	Purpose(s)
Teaching	to present **relevant resources for dealing with situations that may arise in classroom,** online or in interactions with students and faculty.
	to **codify those resources, offering a single site with resources** and links instructors need.
	to provide information on **how the Sail Class Works, Publications/Demonstrating Efficacy, What A Sail Class Looks Like and sublinks for each**
	to give information about **Graduate Teaching Fellows and Postdoctoral Scholars**
	to **suggest ideas for faculty and teaching assistants on teaching in various contexts: Teaching labs, teaching studios, teaching small discussion sections**
	to offer pages designed for faculty at various stages of their teaching to explore ideas on different way**s to engage students in their classes**
	to **celebrate excellence in teaching and showcase the leadership of staff within UCL and nationally through the best teaching samples**
	to give information about **teaching administrator**
	to offer introduction to **object-based learning examples in the university with links to Moodle, object e-resources, case studies**
	to **discuss teaching situations encountered by TAs** and options for applying research-based best-practices to support learning in these situations. skills in students, receiving and using student feedback
	to **help an academic unit's specific teaching and learning needs.**
	to address **the benefits of private consultation on teaching**
	to provide additional information on **teaching tips**
	to provide information about the **Graduate Teacher Certificate**(link)
	to address the benefits of **teaching observation**
	to offer **teaching programs**
	to provide **customized services for departments, schools, and colleges to respond to their particular teaching and learning needs.**
	to **help faculty in academic units explore innovative pedagogical approaches, collecting data to inform curricular revision or the evaluation of educational grants, and providing resources for designing and running effective GSI training programs.**
	to provide information **about self-reflection on teaching, gathering feedback, collaborating with colleagues, practicing the scholarship of teaching and learning, assessing student learning**
	to list information on **course enrollment and grading, scheduling and rooms, course policies and sublinks for under each category**
	to offer numerous **resources to assist instructors with teaching.**
	to give information about **academic integrity policy** to the new faculty
	to **promote academic integrity**, to detect and report academic dishonesty, to get advice from the office of student conduct and the library
	to offer links to resources for new faculty, **research services librarians, Instructional Technology Facilities Universal Instructional Design Implementation Guide** and **policies**
	to meet required levels of **oral English proficienc**y for teaching assignments.
	to offer guidance on issues like **course design, student engagement, teaching difficult topics and contact info**
	to present detailed information **about practice, design, assessment, communication and documentation with separate links**
	to offer **assistance on teaching** to inform about **research opportunities on teaching**
	to list some resources to help faculty to quickly and easily integrate writing into their teaching practice: **Propose a WR course, planning WR course, designing assignments, in-class activities, addressing academic integrity and plagiarism, writing guides, useful links, faculty guide to writing resources for students**
	to list handouts for **diversity in the classroom, course design, teaching methods, teaching and learning with technology, grading and assessment, evaluating teaching**
	to offer detailed information about **technology which aids instruction such as course works, mediathread, edublogs, wikispaces, case consortium, edtech/media support**
	to offer a range of **open online courses and teaching opportunities**. to provide information on **how to create open online courses** to assist on how to **evaluate students who take these online course**s
	to inform faculty about **spring institutes, spring workshops, hybrid learning award, upcoming workshops, entries about recent news**
	to provide several links to serve as **a guideline for all faculty to enhance their understanding of teaching and learning such as active learning, assessment-outcome alignment, diversity and inclusion, expectations, goals and outcomes, feedback, formative, assessment, learning communities, prior knowledge, professional competences, real-world contexts, self and peer assessment, student motivation, student reflection, student responsibility for learning, summative assessment, varied teaching methods, views of learning** and knowledge
	to present **some real examples at videos.**
	to assist faculty **on teaching, testing and evaluating students**

Table 46 (cont'd)
Teaching

Main Service	Purpose(s)
Teaching	to inform faculty about **hybrid learning** and present articles on using technology and recent news
	to assist teaching fellows and course heads in interpreting **Q evaluations (which are online course evaluations by students made at the end of each semester)**
	to provide the faculty with a tipsheet of self-guidance and link to arrange an appointment
	to support civically engaged curriculum development in two main areas**: service learning courses and internship courses.**
	to inform faculty about **flipped classroom** by focusing on teaching and testing
	to inform faculty about **lab/field classroom** by focusing on teaching and testing-grading
	to inform faculty about **lecture classroom** by focusing on teaching and testing-grading
	to inform faculty about **MOOCs** by focusing on teaching and testing-grading
	to inform faculty about **CLL** by focusing on teaching and testing-grading
	to provide **assistance on lecturing skills and techniques, course design, creating assignments, paper topics and exams, course and TF management, discussion leading skills and techniques, interpretation of mid-course and final Q evaluations, grading and giving feedback to student work, grading equity over a large course, problem solving specific issues in a course or section, internal staff difficulties, videotaping and class observations and low Q scores**
	to **offer assistance on teaching, testing and evaluation through an appointment**
	to inform faculty and new faculty about **the faculty programs related to faculty lunches on active learning, new faculty institute, freshmen seminar leaders roundtable, international faculty, blended learning support team and talking about teaching Sessions.**
	to list guidelines of improving oneself as a teacher, articulating a compelling narrative about development as a teacher, job market reports
	to show a detailed **course list with separate links about learning and teaching, leadership and management, personnel, researchers and research support, personal development, women's development, new staff, interpersonal and written communication**
	to **introduce Associates in Teaching Program which allows advanced Ph.D. students to expand their range of teaching experiences and responsibilities.**
	to offer practical resources to help TAs to be more effective TA to offer links to TA's role, How to Lead a Discussion Session, Planning an Effective Review Session, Facilitating Labs, Taing and Your Professional Future, Grad Professional Development
	to help graduate students prepare for their roles and responsibilities as Teaching Assistants and Research Assistants (RAs) at the UW (The annual TA/RA Conference on Teaching, Learning and Research)
	to offer several links for TAs under basic categories such **as getting started, resources for TAs, engaging your students, assessing student learning, professional development**
	to **help the teaching community continue to provide—and strengthen—the high-quality undergraduate and graduate education**.
	to **use theatre to enhance teaching and learning and improve institutional climate**. There are several links and their sub-categories (about the players, sketches and other services, booking the players, FAQS).
	to offer, **a Seattle-based theatre company** devoted to personal and community transformation through performing arts, partnerships and education that focuses on intersectional, critical dialogue on issues such as White Privilege, Racism, Heterosexism, Policed Bodies, Socioeconomic Classism, Ableism, and Microaggressions.
	to **encourage more substantive and stimulating conversations about teaching and learning** through the formation of **Quality Circles for Teaching (QCT)** to watch each other work, measure everything we can to find informative excursion.
	to **bring together faculty members, graduate students, librarians, and staff educators for a series of meetings on like-minded topics** a few of the things that participants walk away with.
	to uncover the wide range of hidden or unidentified barriers to **inclusive teaching and broad student participation in learning,** to **share and demonstrate inclusive teaching strategies and technologies** that can engage students from a wide spectrum of backgrounds.
	to **host events in support of teaching excellence by Faculty Teaching Colloquium, faculty innovation showcase, academic integrity and the millennial generation**
	to **assist staff to develop their full potential** in the work that they undertake for UCL through **the Erasmus Program.**

Teaching is among the most commonly offered main services for instructional

development and the purposes of these services vary greatly. All kinds of services

that cannot be categorized under certain topics (such as consultation, self-study or

evaluation of teaching and so forth) are labeled as teaching because they represent various forms of teaching and learning initiatives taking place in the centers. Although their purposes may vary in depth and content, the common aim is to encourage one or multiple parts of teaching and learning at higher education.

Purposes of teaching services demonstrate certain patterns. They aim to offer *permanent consultancy and scaffolding on* teaching for faculty, departments, TAs, post-doctoral researchers and doctorate students, various *services and programs* for faculty who are interested in pursuing new and innovative approaches to teaching. These initiatives foster critically reflective practice as they provide target audience with the lens of colleagues' perceptions as well as the lens of theoretical information. In addition, teaching services tend to offer not only several pedagogical resources but also information related to the teaching activities of the center and the institution for users.

Table 46 shows that most of these services function as fruitful resources for instructors, faculty, TAs as well as departments, librarians or staff educators. But the reason why they are not categorized as consultation is that they are directly related to teaching. To sum up, they all aim to assist instructors about any issues about their teaching.

Instructional technology

During the data analysis, the researcher found out that instructional technology plays a significant role for development centers as they serve to a number of purposes as listed in Table 47 below.

Table 47

Instructional technology

Main Service	Purpose(s)
Instructional technology	to **select high tech and low tech options for the flipped classroom**
	to **incorporate new approaches to teaching in a technology-rich environment**
	to **create an inclusive learning climate and improve student success with technology**
	to use **emerging technologies such as Canvas, Piazza, M+Box, Google suite**, among others
	to **assess the impact of technology on student learning**
	to leverage technology to **deal with instructional challenges such as encouraging student participation in large courses and to provide easy access to multimedia**
	to use technology for testing, assignments, or informal feedback about student learning
	to ensure that all **students** are able to **access and use IT successfully**
	to **collaborate with the Academic Technology Group** to foster the use of technology for teaching undergraduate courses
	to inform about **Instructional Media Services**
	to provide **tutorials, commentaries and advices on Using/Misusing of PowerPoint**
	to present an overview of **teaching online and hybrid courses** to list Harvard and **edX Resources** and other resources
	to provide an overview of t**eaching with personal response systems "Clickers" and using them effectively** to list **online resources**
	to present **a moderated email forum for exchanging information, advice, tips, and general talk concerning teaching**.
	to provide information about **Online Teaching Resources, Moodle, MOOCS on Coursera and edX, Academic Media Technologies**, More and Contact Info
	to demonstrate **technology initiative samples around the World**
	to present the use of **media and technology for educational purposes**
	to provide links to resources for **effective oral and poster presentations** to provide videos for **content and design concept-white space**
	to **support faculty members in all aspects of the creation of both campus-based online course sites and open courses (MOOCs) that intensify and broaden student learning.**
	to foster the **purposeful application of new technologies to enhance teaching and learning through innovative and effective use of educational technology**.
	to provide information about **digital learning lab, teaching lab and east pyne classroom**
	to **create a new online learning platform**
	to **offer Classes v2, Course Websites and Blogs, Classes v2 Canvas Pilot Spring 2016 office Hours**
	to **empower students with more ownership in their learning** with instructors acting as facilitators in guiding student activities through **interactive learning.**
	to give handouts on **creating a video lesson, making a video or audio clips, organizing/managing teaching resources, personal digital asset management, recording a podcast, recording lecture or presentation and synchronous online collaboration**
	to offer **pedagogically oriented learning spaces and classrooms for holding special class sessions, and consultative services around Learning Space design.: Digital Whiteboards, StatLab Facilities**
	to provide information about **Tablet Loaner Program and Media Equipment Checkout**
	to offer several links of **online offerings and pathways** for faculty
	to provide a wide-range of **Educational Technology assistance, including Blackboard, Test Scanning services, iClickers classroom response systems**, among others.
	to provide **free Test Scanning Services to all faculty** direct link to **the educational technology web site.**
	to offer Links to **Coursera, Edx, UC Online Credit Courses**
	to offer **technological aids on planning your first online course, online course design, grading and feedback online, online discussions and community building, delivering online content, group work online, social media in online courses**
	to host a **free event which aims to highlight instructional technology use and innovation at Duke,** and to provide a forum to discuss new ideas in teaching and learning.
	to offer a direct link to **the Vimeo with several videos related to teaching at Cornel**l
	to offer links to **Moodle, lecturecast, EVS, Turnitin, myportfolio, web conferencing, open educational resources, readinglist**
	to **facilitate and promote effective use of multimedia and computer-based resources in the curricula**
	to add the **Canvas learning management system (LMS) to Learn@UW, the campus suite of teaching and learning technologies. Other technologies in this suite include D2L, Moodle and Kaltura.**

Table 47 (cont'd)
Instructional technology

Main Service	Purpose(s)
Instructional Technology	to **support academic unit efforts to provide students with expanded access to degree and certificate programs through online and blended options** to engage in **ongoing benchmarking of institutional capacity and tracking of metrics** to provide prospective students information on **online and blended courses and programs through the Digital Campus web site and call center**, to **advocate for streamlined policies, Overseas Massive Open Online Course (MOOC) partnership with Coursera, Provides leadership for inter-institutional online partnerships related to online learning**, to aggregates **resources to support online and blended learning (The Learning Technologies Group)**
	to show the list of **MOOCs developed by faculty**
	to show **how other faculty use technology in their teaching.**
	to **offer consultants available for faculty members to address teaching concerns and effectiveness as they relate to course and program planning.** to offer resources for **teaching online** to provide links to **evaluating your online course and development opportunities**
	to give **handouts for faculty who wish to develop an online course** (with links to time and cost considerations and quality standards)
	to put together **a step-by-step summary that integrates information on needs assessment, academic approval, instructional design, and other elements** to provide links to **step by step development process, academic integrity, IP/Copyright, evaluating your program, state regulation, development opportunities**
	to compile **a list of resources related to online and blended learning** to offer links to **university e-learning contacts**, faculty resource directory, national and state organizations, **technology tools** , best practices, development opportunities, feasibility
	to offer links to **getting started with classroom technology, PowerPoint, blackboard, video, classroom response systems, survey tools, online discussions, ePortfolios, blended learning**
	to compile a list of services: **emerging technologies and digital pedagogies, consultations, tools for teaching with technology, classroom technologies, technology training**
	to provide information about **active learning, automated learning**(bubble-sheet assessments), classroom backchannel, classroom response systems and polling, flipped classrooms and blended learning, instructional materials development, lecture and lesson capture, low-stakes assessment, presentation technologies, survey tools, tests and assessments, universal design for learning (teaching for diversity and inclusivity)
	to list technology ideas: Annotated **Maps/Timelines, Annotation and Knowledge Resource Creation, Audio and Video Production, Collaborative Translation and Transcription, Field Data Collection, Interviews, and Walking Tours, Multimedia Collection Development, Network Visualization, Mapping Spatial Data, Text Analysis, Text Encoding and TEI, 3D Modeling/ 3D Scanning, Writing, Hypertext, and eBooks**
	to introduce **a short online course open to all staff**. The course is designed to support and complement Arena Fellowship Application and CMALT, UCL's portfolio in e-learning. The course aims to **model good practice in teaching and learning with technology, showcase excellent work , develop a community of practice among staff interested in online and blended learning.**
	to **offer a week-long institute for faculty who want to redesign a traditional course into a hybrid, blended, or online format.**
	to offer separate links for **CER Equipment Reservation and Checkout, Reveal, Clickers, Panopto Lecture Capture/Podcasting, Turnitin, SensusAccess Web Accessibility Converter, Timeline Creator**
	to offer Separate links **for Adobe Connect, SharePoint, JHBox, VoiceThread**
	to introduce **JHU Libguide -Art Related Images, Visual Resources Collection, Freely Available Images and Multimedia for Educational Use, Performance of or Showing Films in the Classroom**
	to **raise awareness of open educational resources on campus: open access blog**
	to focus on **how instructors and students can benefit from the use of technology through the Teaching with Technology**

As Table 47 indicates, the main purpose of all these services are to provide

instructors, faculty, departments and students with the technological skills needed for

better teaching and learning environment. As Diaz et al. (2009) point out, today

faculty need to use these tools extensively as an integral part of their teaching and keeping up with an increasingly technological workplace, developing ways to further integrate technology into their own instructional experience, and assessing student learning in a variety of instructional delivery modes as well as the old areas as their predecessors. Thus, development centers offer a wide range of technological tools to help them increase their effectiveness in teaching and provide assistance on how to use them effectively.

The purpose statements of all instructional technology services point out that they serve to certain aspects of development. For example, they support the technology as an assessment tool and they foster the use technology for testing, assignments, or informal feedback about student learning. In addition, they offer active learning, automated learning (bubble-sheet assessments), classroom backchannel, classroom response systems and polling, flipped classrooms and blended learning, instructional materials development, lecture and lesson capture, low-stakes assessment, presentation technologies, survey tools, tests and assessments and universal design for learning (teaching for diversity and inclusivity). Some centers also provide free test scanning services to all faculty.

Secondly, *technological tools for classroom use* (such as Canvas, Piazza, M+ Box, Classes v2, CER Equipment Reservation and Checkout, Reveal, Clickers, Panopto Lecture Capture/Podcasting, Turnitin, SensusAccess Web Accessibility Converter, Timeline Creator, JHU Libguide -Art Related Images, Visual Resources Collection, Freely Available Images and Multimedia for Educational Use, Performance of or Showing Films in the Classroom, Annotated Maps/Timelines, Annotation and

Knowledge Resource Creation, Audio and Video Production, Collaborative

Translation and Transcription, Field Data Collection, Interviews, and Walking Tours,

Multimedia Collection Development, Network Visualization, Mapping Spatial Data,

Text Analysis, Text Encoding and TEI, 3D Modeling / 3D Scanning, Writing,

Hypertext, and eBooks, Canvas learning management system (LMS) to Learn@UW,

D2L, Moodle, Kaltura, Coursera, Edx, UC Online Credit Courses, UC San Diego

Extension , Teach-net ,Tablet Loaner Program, MOOCS on Coursera, and Academic

Media Technologies) are introduced in detail on web site either through handouts or

tutorials. In order to assist faculty on how to utilize these technologies or integrate

them into their courses, *constant technology support to faculty and departments* is

also provided either by the development center itself or another technology unit.

With this aim, one of the centers offers "a week-long institute for faculty who want

to redesign a traditional course into a hybrid, blended, or online format".

Centers also offer *overviews of teaching online and hybrid courses.* These courses

are delivered for undergraduates, graduates or post-docs as well as they can be

certificate programs for everybody. *Demonstration of technology initiative samples*

around the world is another category.

Testing and grading

The services categorized as testing and grading refer to a set of practices that strive to

enhance the measurement and assessment skills of instructors. Testing and grading

includes various components such as obtaining the most reliable and valid results to

choosing the best assessment types and discovering the best practices for designing

and grading exams. Below is the list of testing and grading services aiming at
instructional development.

Table 48
Testing-grading

Main Service	Purpose(s)
Testing-grading	to provide **free basic exam scanning services to any instructor who uses the standard orange or green answer sheets for an official class: test scanning fees, faq, interpreting test results, Scanning office Records Handling Policy**
	to ensure that **faculty's learning goals, instructional practices, and assessment techniques are all well aligned through documented guidelines**
	to **offer private consultation on assessment upon request(link**)
	to offer links to the **overview of testing and grading, best practices for designing and grading exams, grading lab reports, evaluating student writing as well as academic integrity, incivility in the classroom and ethical development**
	to address **the missions of the center in terms of assessment**
	to give **detailed overview of grading and feedback, self-assessment of student papers, more resources on the topic, links to get feedback on assessment**
	to give **a detailed description of what "assessment" and "evaluation" are.**
	to offer links to "**the Assessment and Evaluation Process" and "Glossary of Terms"**
	to provide faculty and staff an opportunity **to have a data-driven discussion on program environment, student and faculty needs, policies and procedures, and educational outcomes and impact**.
	to **reveal program strengths and potential limitations, and recommend improvements through outcomes assessment**
	to **give information about assignments**
	to give information about assessment
	to **offer information about grading**
	to **offer basic guidelines of classroom management and testing and grading**
	to present **a handout for assessment**
	to offer links to **what do students already know, measuring student learning, using rubrics, asking good test questions, self-assessment, peer assessment, assessment resources**
	to provide links to **strategies for assessing students in your courses, developing a plan: assessment guide for courses and programs, developing a plan: assessment resources at the graduate level, working sessions on learning outcomes and assessment, what students already know, measuring student learning, using rubrics, asking good test questions, self-assessment, peer assessment**
	to serve as **handouts for methods overview, multiple choice questions, feedback and exams**
	to explain **other ways to assess, from presentations and portfolios to essays and article reviews – and all of them can be used in different ways to enable students to demonstrate what they know to show videos, quick guides and documents about student assessment**
	to serve as **guidelines for instructors on assessment, workshops on assessment, publications about assessment and grants on assessment**

As Table 48 presents, most commonly seen purpose of development centers are to
provide information about the assessment procedures of the university and *list the
mission of the center in terms of assessment*. In addition, they *assist instructors* to
learn more about the assessment and assignments, present workshops, publications
and grants on assessment, *explain other ways to assess*, from presentations and
portfolios to essays and article reviews – and all of them can be used in different
ways to enable students to demonstrate what they know, *show videos, quick guides*

and documents about student assessment, offer web links and *FAQs*. All these

services are offered so as to "ensure that faculty's learning goals, instructional

practices, and assessment techniques are all well aligned through documented

guidelines and consultation services".

Workshops

Workshops are the most commonly provided main service that is in relation to

instructional development. Table 49 lists these services and their purposes.

Table 49

Workshops

Main Service	Purpose(s)
Workshops	to inform about **college classroom, workshops, TA orientation, summer graduate teaching scholars program, TA consultants, instructional consultation**
	to offer links to **new faculty workshop, teaching fellows workshops, learning, teaching and assessment forum**
	to provide **access to educational research that can support individual and institutional efforts to enhance residential student learning**.
	to **meet the needs of specific disciplines and to fit a variety of time frames. A manual containing readings, handouts, and exercises accompanies each workshop**.
	to conduct workshops called **Teaching Fundamentals, What We Know About Student Learning, problems, pitfalls, booby traps and surprises in teaching, active learning, captivating classes: meeting the lecture challenge, presentation skills for academics, how to use team work in the classroom, assessing student learning and educational practice, leading recitations, mentoring graduate students**
	to give **information about each workshop within workshop menu**
	to offer **seminar series, workshops, and informal discussions aimed at disseminating knowledge about effective teaching methods and new instructional technologies**
	to offer programmes, short seminars, **workshops and resources tailored to support teaching**
	to offer separate links to **Development Programmes, Resources, Course list:by topic, Bespoke workshops**
	to offer an **annual workshop on transformative learning for staff and students**
	to offer **orientation workshops for new faculty**
	to offer information **about the upcoming and previous workshops for teaching assistants**
	to **improve teaching and learning by** *discussing and developing new technologies*, **and** *designing and conducting real-world experiments*. **to extend MOOCs, to improve student engagement, to teach research skills, to accelerate learning of interdisciplinary subjects, and to encourage collaborative research.**
	to offer the format information and **current members of the workgroup** and calendar and private wiki
	to **explore how teaching technologies can be used to help students achieve learning goals**.
	to **help instructors think about their classrooms as environments** which can be unknowingly affected by bias, both from instructors and from students.
	to help instructors **reflect on how they approach their roles as instructor.**
	to **discuss three themes--discussion, lecturing, and assessment.**
	to provide faculty with the opportunity **to join one of the five Summer Institutes on Undergraduate STEM Education being held across the country.**
	to invite **faculty into an on-going conversation on interdisciplinary scholarly debates through the Midwest Faculty Seminar** to **excite intense intellectual consideration** of new scholarship by both university faculty presenters and liberal arts college faculty participants.
	to offer links to c**urrent conference, travel and accommodation, upcoming institutes, special programs fair, preparing future faculty, past institutes**

Table 49 (cont'd)
Workshops

Main Service	Purpose(s)
Workshops	to offer **workshop on Teaching in the College for both new TAs and new faculty and to assist course assistants and faculty members on various aspects of teaching**
	to **provide new instructors the opportunity to share their latest innovations in classroom teaching with co-graduate students**.
	to **offer faculty, particularly those who teach large classes, an opportunity to come together and discuss challenges they face and changes they would like to implement in their teaching through Collegium workshop serie**s. to actively engage participants in open conversations about teaching and learning. to explore active learning strategies, teaching with technology, assessment, and diversity as they relate to large class instruction.
	to offer **workshops, seminars, and conversations for instructors on a variety of teaching and learning topics** and to meet the needs of both seasoned professionals and newcomers through the discussion of shared experiences and knowledge
	to **enhance their teaching at Princeton**. to offer a robust and integrated platform of resources and expertise that extends from pedagogy and learning to educational technologies and video production.
	to **offer a setting for faculty to come together for two days of course-building and guided discussions led by experts from the center and the Council on Science and Technology through The Course Design Institute workshop series**
	to **bring together faculty from across divisions and departments and provide opportunities for the sharing of knowledge and ideas among peers for Teaching Conversations in the Residential Colleges**
	to **announce workshops for 2016**
	to **foster discussions about teaching and learnin**g (the importance of student diversity, faculty diversity, and equitable teaching practices within the Yale community)**(the Spring Teaching Forum)**
	to **serve as basic introductions to important aspects of teaching and learning in an Imperial context through workshops designed for all faculty members**.
	to announce 'practical guide' series that consists of short, pragmatic workshops covering key **practical aspects of teaching and learning**
	to provide **assisting with PhD supervision, communicating knowledge, interactive teaching, laboratory teaching, lecturing, making the most of one-off teaching, setting and marking assessments**
	to offer a **workshop strand catered to staff who teach undergraduate medical students**.
	to **introduce teaching and learning in the Faculty of Medicine** by focusing on teaching in clinical settings, introduction to problem-based learning in the faculty of medicine, introduction to feedback and formative assessment in the faculty of medicine, a practical guide to small group teaching in the faculty of medicine, focus on managing challenging groups in problem based learning, **medicine by request workshops**
	to **offer a by-request workshop facility for groups of people at the request of a particular department, faculty, hospital, trust, division or campus.**
	to offer links to **workshop by request form**
	to offer **workshop calendar**
	to offer links to "**Introduction to Teaching for Learning"** which is a one-day workshop for staff who are relatively new to teaching in higher education.
	to offer a link to "**practical guide workshops"**
	to **improve on the past, address current issues and look ahead to new possibilities. through workshops and conferences to demonstrate the videos of previous workshops and conferences**
	to provide an opportunity for faculty members **to discuss new learning and teaching practices and theories in a forum**
	to **assist new TAs on teaching experiences**
	to provide information about **the workshop series aimed teaching enrichment**
	to provide information on **workshops, discussion Series, university-wide teaching conference, classroom research and teaching symposium, graduate coursework in higher education, Graduate fellowships**
	to offer **courses teaching and learning in Switzerland and abroad through workshops and individual consultations on request**
	to enable to **think creatively about teaching, learning, and assessment in one's discipline**. to provide an environment where **instructors can meet colleagues from different disciplines and to plan practical approaches to helping students learn**.
	to provide information about **teaching related workshops, non-degree programs, classroom observations, teaching fellows and orientation programs**
	to **offer Annual TA Orientation and to aid TA s in their teaching.**
	to **examine teachers at many levels** – from new graduate student instructors to senior faculty through **workshops**
	to **foster collaborative learning, learning in STEM, learning and diversity, and conceptual learning, among others**
	to assist faculty on classroom technologies, MOOCs, teaching ideas for inclement weather
	to show handouts for **course redesign, workshops for faculty, faculty peer visits program, eQuality essentials**

Table 49 (cont'd)
Workshops

Main Service	Purpose(s)
Workshops	to list **all upcoming events with separate links**
	to **present a detailed description of exploratory seminars**
	to **present a detailed description of assessment seminars for faculty**
	to provide **an extensive list of workshops on teaching and learning** such as center for teaching and learning, student learning center, the language center, public service center, American Cultures, Educational Technology Services, GSI Teaching and Resources Center, College of Letters and Science, Townsend Center, The university Library, Disabled Students Program, College Writing Program, Multicultural ED Program and office of Planning and Analysis
	to offer links **to upcoming events, Communication Matters Workshop Series, See Also and Don't Miss These Courses**
	to inform about **center Project for Effective Teaching**: Announcements, Upcoming Events, Committee Meetings
	to **present the list of upcoming events**
	to l**ist workshops**
	to inform **faculty, graduate students, post-docs and undergraduate students about the upcoming workshops, seminars, poster presentations**
	to inform about the **office's efforts to both conduct and cultivate rigorous engineering education research and facilitate the adoption of research-based effective teaching practices.**
	to offer links to **Engineering GSI Teaching Orientation, Engineering IA Teaching Orientation, Workshops, New Faculty Fellows, Ongoing Professional Development**
	to **list past and upcoming workshops and seminars**

Table 49 presents that workshops for instructional development can be held for various audiences: all faculty members, instructors, TAs, graduate students, post-docs, early-career faculty and new faculty. There are a number of workshops designed for early-career faculty including TAs so that they can get informed about the latest advancements in the field, improve their skills of instructional technology, share and exchange experiences and reflect on their teaching practices in general. Some of them are annual workshops for TAs, "Introduction to Teaching for Learning" which is a one-day workshop for staff who are relatively new to teaching in higher education, introducing teaching and learning in specific faculties such as the Faculty of Medicine and Faculty of Engineering, informing TAs about college classroom, workshops, summer graduate teaching scholars program, TA consultants and instructional consultation. Thus, all these workshops aim at *supporting and orienting TAs* for the university environment through pedagogical, technological and professional support.

However, workshops are not limited to only teaching-related issues, there are some workshops conducted for *professional improvement* such as Communication Matters Workshop Series and Ongoing Professional Development Series for the faculty of Engineering Department.

Table 49 shows that the teaching-learning centers offer workshops not only for faculty, assistants or instructors who are relatively at the beginning of their career, but also *faculty from all levels* and including graduate students who are interested in instructional development. The content of the workshops are not limited to instructional development, but also *mentoring and assisting graduate students* as well. In addition, these workshops can be held in a wide spectrum, across the whole country such as Summer Institutes on Undergraduate STEM Education held for providing faculty with the opportunity to join one of the five institutes.

The Midwest Faculty Seminar aims to invite faculty into an on-going conversation on interdisciplinary scholarly debates in order to "excite intense intellectual consideration of new scholarship by both university faculty presenters and liberal arts college faculty participants". Thus, it can be concluded that interdisciplinary workshops can also be held by the centers so as to *discuss teaching and learning related topics in a broad spectrum.*

Organizational development

The researcher finds out that there are many services offered for organizational development and analyzed the purposes of each service. The results are shown in Tables.

Career support

Some development centers put job advertisements for experts to assist faculty,

department or students on their web sites. Since these job opportunities help the

center be visible as an organization, the researcher categorizes these advertisements

as career support aiming at organizational development. Table 50 shows career

support as main services aiming at organizational development.

Table 50
Career support

Main Service	Purpose(s)
Career Support	to offer **job opportunities and advertisements** under different categories: faculty opportunities, unit 3 opportunities(sessional), student and postdoctoral fellows
	to provide the list of **current job opportunities for the center**

Table 50 presents that the common purpose of these career support services is to list

the job opportunities at the development center. These job advertisements are for

faculty who will work as experts or consultants, support staff, graduate students,

undergraduate students and post-docs.

Community-campus partnerships

Community-campus partnership is a more extended version of community service

(as a main service used through the analysis). It includes various stakeholders such as

non-profit organizations, government agencies and corporations whereas community

service focuses more on the pedagogical side, student gains of the practices. Below is

Table 51 which shows community and campus partnerships aiming at organizational

development.

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Table 51

Community-campus partnerships

Main Service	Purpose(s)
Community-campus partnerships	to **introduce faculty members to community partners who are interested in service learning projects**
	to list **the principles of good community-campus partnerships**
	to **provide contact information for organization managers**
	to **list FAQs for Community Partnerships**
	to list **several projects that are ongoing using iPads provided by the Provost's Innovation in Education Fund, running a collaborative learning app called SKIES, developed by two alums (Julius Su '07 and Victor Kam '08).**
	to offer the **list of Provost office Affiliates, other Teaching and Learning Partners, school and College Partners**
	to **enhance teaching and learning activities through different partnerships**
	to **be represented in various associations and to cultivate this way the scientific exchange**

Table 51 shows that some centers support community-campus partnerships through organizations and projects so as to "enhance teaching and learning activities through different partnerships and to be represented in various associations and to cultivate this way the scientific exchange even beyond the university". The web sites of these centers provide all stakeholders with the necessary information for starting and continuing such partnerships: introducing faculty members to community partners who are interested in some learning projects such as service learning projects, the list of principles of good community-campus partnerships, list of FAQs, information about ongoing projects, list of Provost office Affiliates, other Teaching and Learning Partners, school and College Partners. All these partnerships aim to contribute to the centers' growth as an organization.

Consultations

Consultation services include a wide range of practices for increasing the institutional and organizational culture. Their purposes are shown in Table 52 below.

Table 52

Consultations

Main Service	Purpose(s)
Consultations	to provide **a list of people associated with the center**
	to present the **information about the center's classrooms and contact information for appointment**
	to state **the history of the center**
	to provide **information about the Advising Council**
	to show **the list of campus policies**
	to give **information about the library**
	to present information about **the Learning Institute, its staff, groups, research, annual report, getting involved**
	to **offer a calendar** that displays open events relevant to the center Project for Effective Teaching (CPET) and the center outreach
	to give **information about the collection of books published by the center**
	to inform about **the Current and past co-directors**
	to present **Library Collection, TA Evaluation Form, Teaching Quality Feedback Reports, the center's Massive Open Online Courses (MOOC) on STEM teaching, CTLO Resources Page**
	to provide **information about what the center for community is**
	to provide the **interactive storymap** and the **consultation addresses** so that grad students, undergrad students and faculty who are interested in community-engaged activities can contact.
	to list **brief CVs and motivation statements of student advisory board members**
	to provide **contact information**
	to provide **information about The Faculty Executive Committee** (FEC) to provide general oversight of the academic programs in the College, Serves as an advisory
	to offer links to **home, login, about, for departments: proposal guidelines and samples, course inventory management system, committee governance, senate websites, contact**
	The **mission statement** of the center
	to provide information about **the center, their approaches, programs and services**
	to offer **current News about the university**, link to **the older news**, **upcoming events** and **follow us section**
	to list **names and contact info with the pictures of staff**: leadership, Teaching Initiatives and Programs, Educational Technology and Instructional Design, Software Development and Experience Design, Media Production, Technology, Communications and Outreach, Administrative Support
	to offer **contact address**
	to offer **job categories with separate application links**
	to offer **general university resources under the headings of policies, administrative services, course admin, teaching support, office of provost, arts and sciences, morningside professional schools, medical center, affiliated institutions**
	to offer **consultation information** for instructors, services for departments and programs
	to provide information about **center for teaching and learning staff**
	to provide **information about the center community, colleagues, community members and other visitors**
	to list **contact address**
	to present **calendar of Events**
	to present the **mission statement of the teaching and learning center**
	to offer the **list of the staff**
	to offer the list of the **English Language Program staff**
	to **explain the innovative uses of instructional technology, Academic support for undergraduate students, Collaborative exercises and academic integrity, Classroom design**
	The list of **council members and council research assistant**
	The **list of faculty fellows**
	The **list of the graduate teaching fellows**
	to **introduce the council, the aims of the council, co-chairs, the list of student members**
	to present the **biography of the founder of the center**
	to present the **contact info**
	to **list the teaching programs offered by the institution**
	to **list the programs and services currently offered for undergraduate students**
	to **advertise workshops**
	to **advertise the English language program**
	to present **Calendar of Classes and Tests**
	to **list FAQs about English Language Program**
	to present **the contact information of the English language program**
	to **offer resources for Current Fellows**
	to **present the statements of fellows**
	The **list of campus representatives**
	to **offer information about the center's programs and staff**
	to **provide information about staff**
	to offer **the list of upcoming events**

Table 52 (cont'd)
Consultations

Main Service	Purpose(s)
	to offer **contact information**
	to offer **the director's message(video)**
	to provide **contact information of the faculty and staff**
	to provide links to **the writing centre, English Language Development Centre, Math and Stats Learning Centre, Service Learning and Outreach, Presentation Skills, WebOption and Lecture Casting, Educational Technology, TA and Grad Support, Facilitated Study Groups**
	to provide information about **the center Ambassadors that consists of faculty members acting collaboratively to support the work of the Centre for Teaching and Learning.**
	to offer contact information of the e**ach unit of the center**
	to provide **mission statement as well as a brief information of the staff**
	to **offer Booking FAQ**
	to show **a detailed workshop calendar for upcoming events**
	to **provide brief information on workshops, faculty specific training, general workshops and networks and events , postgraduate certificate in university learning and teaching and STAR Framework**
	to offer **subscription form for the Newsletter**
	to offer **bespoke consultancy to individuals and groups on all aspects of teaching and learning to offer consultancy request form**
	to provide **information about directors, staff, senior council and location**
	to provide **the list of upcoming events**
	to provide **mission statement and staff information**
	to offer **the list of upcoming events**
	to state **the mission Online** and Technology Enhanced Education, which is to support innovation in the development, use, and evaluation of online and other technological tools with the goal of enhancing learning.
	to offer the **list of partners and collaboratives**
	to offer **contact information**
	to **contribute to faculty members to get informed about the technological aid available at the center**
	to present **information about the staff**
	to offer **the annual report**
	to offer **the contact information**
	to offer **a search engine to find out personal events**
	to list the **events and registration**
	to offer **faculty events, announcements, in the news, explore and quick links**
	to share **the mission statement**
	to offer **the list of staff**
	to share **the advisory board**
	to **introduce Menschel Distinguished Teaching Fellows**
	to introduce **The Center for Teaching Excellence (CTE) Fellows**
	to offer **contact information**
	to provide **quick links to the homepage of the web-site**
	to offer the **mission statement of the center**
	to offer **the list of staff**
	to **introduce the members of the community**
	to **share links to surveys and contact the student surveys team**
	to **share links to surveys and meet the team**
	to **offer details and the contact information of different departments of the teaching and learning portal**
	to **introduce the center classrooms**
	to **provide photos, videos and more information on classrooms**
	to **explain the Center for Simulation, Clinical Skills, and Telemedicine Education supports, educational mission of teaching, learning, and assessment through simulation**.
	to **offer students a comfortable place to use over 50 computers and receive drop-in assistance with technology (The Tech Commons)**
	to offer **detailed facts and figures about the design and construction of the center, including achievements in environmental sustainability.**
	to present **calendar of events**
	to introduce **staff, advisory board, fellows, graduate students, undergraduate mentors, collaborators**
	to de**monstrate the mission statement of the enter for Advancing Learning and Teaching** that is dedicated to four core activities: **faculty development; graduate student and postdoctoral scholar development; undergraduate academic support and enrichment; and assessment, evaluation, and education research.**
	to list **all campus including off-campus partners**
	to state the **mission of faculty development center**

Table 52 (cont'd)
Consultations

Main Service	Purpose(s)
Consultations	to **offer contact information**
	to **support accreditation, faculty and staff teaching development and academic achievement for diverse groups of learners.**
	to **introduce the committee**
	to **introduce The Division of Continuing Studies**
	to give **information about the vice provost**
	to share **information about the vice provost for diversity and climate, division of diversity and equity and educational achievement units, programs, initiatives, and partnerships, policies and reports, related campus resources**
	to list **information about the vice provost for faculty and staff programs, resources for Faculty staff**
	to list the **mission statement**
	to inform about the **vice provost for libraries and university librarian and library work**
	to give information about the **Vice Provost for teaching and learning**
	to give **information about the center staff**
	to describe the **selection of external teaching staff**
	to explain the **mission statement**
	to **describe the network**
	to list the **News and Keynote at Lunchtime (in German)**
	to provide the mission statement
	to provide **contact info of the staff**
	to offer the **list of the advisory board**
	to list **faculty success stories**
	to **demonstrate the contact info**
	to **strengthen instructional and academic technology collaboration and support across the university**
	to offer the **list of staff and their contact information**
	to offer the **contact info of the center**
	to provide the **new center director announcement**
	to offer **filters by event type**
	to assists faculty in **vendor selection, negotiation, work-orders, contract management, and reporting: categories of service, how to secure a vendor**
	to offer the list of **upcoming events**
	to offer the list of **current and recent fellows**
	to provide *resources available to assist schools, colleges and departments* as they develop or improve training programs to meet the needs of their Graduate Student Instructors. to present **informative Occasional Papers written by center staff and faculty on Recent issues** include use of online collaboration tools such as Google Apps, use of laptops in the classroom, student teams in STEM courses, and best practices for designing and grading exams.
	to offer **Departmental GSI Development: A Handbook for Faculty and GSMs Who Work with GSIs is designed to support faculty and graduate student mentors who run departmental training programs for new GSIs**
	to **suggest potential coaches and to maintain a list of coaches who have experience of coaching successfully at the particular university/ in higher education**
	to offer **contact information**
	to **inform about what coaching is**, what kind of topics can be taken to coaching, the cost of it and who pays, what types of coaching are available, what can the center do to help departments source coach, contracting with a coach, how can a coachee get the best from a coaching relationship, code of ethics
	to offer **links to programming menu, residential college request, student group request**
	to offer links of **consulting for Initiatives and Consulting for External Institutions**
	to list **campus Initiatives**: Educational Innovation (EI), Canvas LMS Implementation, Go Big Read and Annual Events: Teaching and Learning Symposium, Ideas to Excellece, Diversity Forum, Showcase
	to list the **mission statement and contact information for individual consultation**
	to provide **individual consultation for the participants of "Ad Feminam" which is a mentoring programme for women seeking individual support in approaching leadership roles.**
	to **offer contact information for individual consultation**
	to **present multiple methods for collecting information about instructors' activities, accomplishments, and effectiveness in teaching, in the classroom and beyond**.
	to provide a platform to discuss teaching evaluation methods.
	to offer **a service on mid-term student feedback and consultation and ongoing professional development (specific to Engineering Department)**
	to **tell the story about teaching and learning, across campus and in the public sphere via technological tools**

Table 52 indicates that consultation services serve as rich resources of information for the visitors of the centers' web sites. In addition, they contribute to the visibility of the center through such information. As can be seen in Table 52, the common purpose is to "offer, provide, explain, list, describe or present" information about the *history of the centers*, *their mission statements, center staff, their CVs and contact information, Vice Provost, the directors' messages, on and off campus affiliates, campus initiatives, current and recent fellows, news, announcements, e-libraries, upcoming events, success stories, introduction of the committee and board members, annual reports, detailed facts and figures about the design and construction of the centers, list of partners and collaboratives, search engine, information about directors, staff, senior council and location, the classrooms and technological support of development centers available for booking* and *FAQs sections*. Moreover, the departments that development centers are collaborating with are also introduced through direct links. The introductory information about each department of either center or university itself is categorized as consultation services aiming at organizational development because the centers aim to contribute to the advertisement and introduction of these departments and services via their web sites.

Courses

One of the courses offered by a center aims at organizational development of this center. Table 53 shows this main service.

Table 53
Courses

Main Service	Purpose(s)
Courses	to **offer the Annual Lecture on the aims of the education, past speakers and videos**

As the table 53 clearly shows, there is an annual course serving as a main service by the center and it is about the aims of the university education. There is information about the past speakers and past videos of the courses as well. Since the center is famous for this annual course and there is an advertisement of the course on the web site, the researcher categorized it as an organizational development service.

Donations

Donations or financial aids help any organization to develop financially and provide them the necessary financial support to reach their goals. Kuhlenschmidt (2010) states that a development center web site can encourage people to make donations following institutional policies. Through the analysis, the researcher encounters one donation service aiming at organizational development as stated in Table 54.

Table 54
Donations

Main Service	Purpose(s)
Donations	to **encourage people to support the center's innovative programs**: Kanbar Center for Simulation and Clinical Skills Education, Teaching, Learning Technology Commons, Classrooms

As seen in table 54, there is one donation main service under donation category. The purpose of this service is to give information about the center's innovative programs and encourage people to donate on the center's innovative programs.

Engagement in national projects

Table 55 lists national projects main services.

Table 55

Engagement in national projects

Main Service	Purpose(s)
Engagement in National Projects	to **increase public awareness and understanding of basic science and engineering** principles through Caltech Educational Outreach program
	to **expose local and regional elementary, middle, and high school students, teachers, and parents to cutting-edge science and technology.** to **inform, inspire, and motivate specific audiences** through both informal and formal education tools and mechanisms
	to **list announcements and events, sample program ,About US section , information for parents and teachers ,Teaching and Learning, Events**

Nearly all of the top twenty-eight universities whose teaching and learning centers were analyzed are parts of national projects but not all of them engage in these projects through their development centers and advertise it on their web sites. The ones that have done aim at increasing public awareness and understanding of basic science and engineering principles through Caltech Educational Outreach Program, expose local and regional elementary, middle, and high school students, teachers, and parents to cutting-edge science and technology and motivate them through several projects. In addition, announcements and events, sample program, About us section, information for parents and teachers, Teaching and Learning and Events are also provided via the web site.

Faculty learning communities

Faculty learning communities have multiple developmental purposes and organizational development is one of them. Table 56 shows the main service with the mission of organizational development.

Table 56

Faculty learning communities

Main Service	Purpose(s)
Faculty Learning Communities	to **serve as a network of communication and collaboration amongst the staff units on campus who work to enrich teaching and learning for faculty and students as well as the center.**

As seen in Table 56, there is one faculty learning communities main service called

The Mash-up of Academic Partners. It is a faculty learning community that comes

together near the conclusion of each semester around topics of interest since this

forum is advertised on the web site greatly, its main mission is considered to be

mainly organizational development.

Management of grant-funded projects

Management of grant-funded projects is another main service that Lee (2010)

introduces as one of the integral parts of any faculty development center. Lee (2010)

states that management of grant-funded projects is:

an expansion of a center's campus resources

by partnering with other academic and support units or even

other institutions to procure grants to support a project on its campus such as inquiry-

guided learning; first-year seminars; reform in science, technology, engineering, and

mathematics courses and curricula; teaching large-enrollment courses; the integration

of instructional technology; or mentoring. (p.28). The successful management of

these projects is significant for the visibility of the institution and the center

nationally (Lee, 2010). The center web pages of the selected twenty eight

universities were analyzed and the results that include management of grant-funded

projects as main services with the mission of instructional development are shown in

Table 57.

Table 57
Management of grant-funded projects

Main Service	Purpose(s)
Management of Grant-Funded Projects	to **enlist educational outreach components of scientific grants and stand-alone proposals for K-12 educational programs**

Table 57 (cont'd)
Management of grant-funded projects

Main Service	Purpose(s)
Management of Grant-Funded Projects	to **develop strong educational outreach components for grant proposals**. to **create programs that provide rich experiences for target audiences and meaningful professional development and growth for participating** to offer **Caltech representatives** and **National Science Foundation Broader Impacts Review Criterion** link
	to **support program evaluation for grant reporting and program improvemen**t to deliver program assessment handbook
	to **house and incubate faculty-driven projects related to teaching and learning**. The Learning Lab will foster, elevate, and amplify the teaching and learning experiments and explorations of the faculty
	to give information about **project development, design research methodology, partnerships, grant opportunities** to **inform faculty on grant-funded projects related to instructional development and teaching**

One of the purposes is to provide the educational outreach components of scientific grants and stand-alone proposals for k-12 educational programs and these initiatives enable the center to develop as an organization that can support institutional recognition. The second one also has similar purposes in addition to the link for Caltech representatives and National Science Foundation Broader Impacts Review Criterion. The last one informs about supporting program evaluation for grant reporting and program improvement as well as program assessment handbook. Although it can also be seen as consultation due to its easy access to users, it rather promotes organizational growth of the center with clearly defined program evaluation and improvement criteria. The management of grant-funded projects aims to foster, elevate, and amplify the teaching and learning experiments and explorations of Harvard's faculty and therefore contribute to the organizational development of the center that initiates these projects.

Orientations

Orientation for organizational development is another main service offered by development centers. Table 58 shows these services below.

Table 58
Orientations

Main Service	Purpose(s)
Orientations	to **promote the safety and well-being of minors**
	to **provide guidelines and information as well as related forms**

The purpose of this orientation is to inform to all faculty, staff, students, volunteers and other members of the Caltech community about the safety and well-being of minors on campus. This orientation contributes to the organizational growth of the faculty in that it determines the guidelines of treating minors and spread these rules to the all communities of the faculty. The second service is also provided by the same center and related to the minors' regulation. It serves as guidelines and information about the regulation as well as it provides some forms about it.

Publications

Some publications support organizational development as well as instructional development. Table 59 shows these publications main services, their missions and purposes.

Table 59
Publications

Main Service	Purpose(s)
Publications	to **offer The Online Bok Blog with the aim of sharing educational experiences of faculty member and center staff with colleagues, peers and students**
	to offer **Teaching Commons Blog** so as to discover and share new ideas, find answers, and read about the latest developments in teaching and learning at Stanford.
	to present information about **the forum post proposals** (format, topic etc.), and a link for **application and latest posts**
	to **publish a collection of short papers on pertinent teaching and learning topics with practical suggestions and resources**.
	to present **2015 papers and archives**
	to offer **the blog with the aim of connecting to the members of institution**
	to present **published News**
	to offer **links to the center's publications**
	to offer links to the **published annual reports**
	to **consult with individuals, programs, and departments across campus to stimulate partnerships and enhance the opportunities for teaching and learning**.
	to present links to the **annual reports, online initiatives, LMS (Sakai), showcase, active learning**
	to **publish a monthly email newsletter to the Duke campus community** so that people find first notice of **funding and grants available from CIT, information about all upcoming free CIT events, Links to useful resources to help faculty use technology effectively in teaching**
	to offer the center's **blog so that the users can keep up to date on latest instructional technology of the university**

Table 59 (cont'd)
Publications

Main Service	Purpose(s)
Publications	to present **newsletter, Provost, Vice Provost Views and Perspectives in a publication**
	to offer **reproductions of woodblock prints from the Library's East Asian Collection decorate "huddle spaces" in the TLC**.
	to offer link to the **online catalog**
	to offer the **list of funded projects since 2000**
	to present the **report of the Ad Hoc Committee on Learning Space Improvement**
	to offer **Publications by years**
	to offer **selected presentations of team members, which have been produced for conferences or central events.**

All kinds of published documents about the running and organization of the centers are considered as publications aiming at organizational development. These publications are teaching blogs, forum post proposals, bulletins, teaching-related papers and archives, news, annual reports, newsletters, online catalogs, the list of funded projects, some reports, publications by years, the lists of conferences and central events conducted by center staff. These documents are either online or print-published and they support organizational development of the center as they are the products of a group of center staff or individual staff.

Speeches

Speeches can also be a service promoting organizational development when they serve as a session related to the working of the center. Table 65 shows the list of speech promoting organizational development.

Table 60
Speeches

Main Service	Purpose(s)
Speeches	to list all **upcoming speeches about the further development of the center as well as the previous ones conducted in the university to inform university community**

Table 60 indicates that there is only one speech service which adopts organizational development mission. This service compiles the past events conducted by the center as well as upcoming ones and it serves a kind of annual report of the center work. It

is related to the organizational growth of the center as it informs the attendants about what they have organized so far and what they will do in the future about the development of the center.

Instructional technology

Through the data analysis, the researcher discovers that technology is a contributing factor to organizational development. Table 61 lists the technology main services promoting organizational development and their purposes.

Table 61

Instructional technology

Main Service	Purpose(s)
Instructional Technology	to **offer *Principia* which is an interactive, wiki "encyclopedia" aiming to gather, organize and circulate local knowledge about effective learning** to impart **context-specific methods of learning--including approaches, strategies and techniques--rather than subject matter content as other wiki-encyclopedias do.**
	to implement **creative and innovative solutions to support Caltech's research and education mission, development, and outreach.**
	to **create award-winning videos and animations for news, marketing, event, and outreach purposes** to record, live broadcasting, and to provide audio visual support for lectures and events, to realize Caltech **faculty's vision for their online courses, to create figures, illustrations, and animations for scientific publications and videos,** to **design and install new technologies and capabilities for classrooms, lecture halls, and meetings spaces**
	to **offer Caltech AMT Demo Reel, Faculty Feedback**

Table 61 shows that instructional technology can support organizational development through several tools such as Caltech AMT Demo Reel, Faculty Feedback, implementing creative and innovative solutions to support Caltech's research and education mission, development, and outreach, Principedia, creating award-winning videos and animations for news, marketing, event and outreach purposes, record, live broadcasting as well as visual support for lectures and events to realize Caltech faculty's vision for their online courses, to create figures, illustrations, and animations for scientific publications and videos, designing and installing new technologies and capabilities for classrooms, lecture halls and meetings spaces. It can

be inferred from Table 61 that all these technological assistance for departments and lecturers contribute to the organizational and institutional growth.

Workshops

Workshops can also include various topics and some of these topics are related to the organizational development of the center. Table 62 lists these workshops as a main service related to organizational development.

Table 62
Workshops

Main Service	Purpose(s)
Workshops	to describe the **support offered to individuals taking on the most senior strategic roles, the induction programme for departmental Heads and Faculty Board Chairs, and the Academic Leadership Development Programme for those who wish to explore academic leadership.**
	to offer an **integrated suite of programmes to support those in the University who have responsibility for managing staff or projects as part of their role.**
	to offer information about **managing induction, personal development review, for women**
	to serve as a useful introduction to the tasks and responsibilities involved in running a research group: **getting grants, managing and developing staff, directing projects, and managing finances all need particular skills.**
	to offer workshops about **'Research Supervision' aiming at new supervisors and the more experienced staff from whom they may seek guidance**.
	to offer contact information and related links **to research supervision and staff learning scheme, documents (Principal Investigators' and Research Leaders' Survey and PIRLS executive summary**)
	to offer a wide range of workshops and resources **for support staff, whether they are in a clerical, secretarial, administrative, technical or ancillary role.**
	to present contact info, related links to induction for **new staff online course, Springboard Women's Development Programme, Staff Learning Scheme, Library Resources**
	to **encourage and support women's career progression at Oxford**, recognising that, as in many other organisations, the proportion of women tends to drop at the more senior levels in each staff group through workshops
	to host **the Ad Feminam mentoring scheme**, intended to **encourage women to explore their leadership potential within academic life, or within an administrative career**, for example, **as leaders of departments and divisions or taking leading roles in university governance.**
	to provide **people with some of the core skills for managing both themselves - including time and workload management - and managing relationships with colleagues**. The workshops are particularly aimed at and relevant for **support staff, staff supervisors and first line managers.**
	to offer different types of workshops: **Assertiveness: managing relationships in the workplace, time management for support staff and managers, understanding and managing stress: for individuals, managing upwards, giving and receiving feedback, emotions at work, mindfulness for health and well-being**
	to offer **public seminar programme on higher education each term**
	to examine teaching and learning in greater depth and is designed for those with greater teaching experience and wider College responsibilities (a series of workshops)
	to offer workshops on educational design and assessment management, external examining
	to offer two workshops and a series of drop-in sessions aimed **at supporting faculties' journey towards Higher Education Academy recognition**
	to **meet the needs of the significant number of college staff whose job involves supporting learners but who are not part of the full-time academic staff.** to **increase participants' knowledge of learning and teaching issues relevant to their roles at Imperial.**

Teaching-learning centers sometimes offer workshops for professional development not only for faculty and instructors about teaching and learning issues, but also a broad spectrum of professional development for all people, including support staff or people who have managerial roles. Some of these workshops can also be open for all participants as Table 62 shows.

Table 62 shows that there are many purposes of workshops aiming at organizational development, from time, emotion and stress management for leaders and support staff to professional development opportunities for specific groups such as women through Ad Feminam mentoring scheme, so as to encourage women to discover their leadership potential in their career path, or in administrative career as leaders of departments or taking leading roles in university governance. In addition, they offer integrated suite of programmes, either online or not, for faculty, managers, administrators or groups specific for their needs and roles. One can conclude that, by looking at the purposes, there are specific categories of workshops promoting organizational development: *induction programs for department heads and board chairs, academic leadership, management skills, personal development, professional development* (such as informing about tasks and responsibilities involved in running a research group), *workshops on support staff, women's development programs and public seminars*.

Curricular development

Having listed the main services, missions and sub-missions and centers aiming at curriculum development, the researcher also listed the purposes of each main service that carries out curricular development mission.

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Community-campus partnerships

Through data analysis, it has been revealed that community-campus partnerships

serve to three purposes related to curriculum development as shown in Table 63.

Table 63
Community-campus partnerships

Main Service	Purpose(s)
Community-campus partnerships	to **connect Caltech people and resources with teachers, students, and members of the general public.**
	to **develop strong educational outreach programs that exhibit the highest standards of (STEM).** to **connect researchers with K-12 schools and classrooms where the curricular emphasis is most compatible with the subject matter and goals of each initiative**. to **work with local teachers in advance to prepare their students for Caltech campus visits and classroom visits by Caltech engineers and scientists to ensure that optimal benefit.**
	to **held meetings of outreach coordinators campus-wide, providing forum for sharing events, updates, resources, needs and opportunities.**

Table 63 explains that the centers work closely with outreach coordinators campus-

wide, providing forum for sharing events, updates, resources, needs and

opportunities to develop strong educational outreach programs. They made

connections with K-12 schools when the curricular emphasis is most related to the

subject matter and goals, hold meetings of outreach coordinators campus-wide,

providing forum for sharing ideas on curriculum development. In these ways, they all

contribute to curriculum development.

Consultations

Consultations can also support curriculum development in many ways. Table 64

shows these individual consultation main services, their mission and purposes.

Table 64
Consultations

Main Service	Purpose(s)
Consultations	to **collaborate with faculty on the design of undergraduate General Education courses and Graduate Seminars in General Education (GSGE's)**
	to **support innovative pedagogy, including active-learning, object-based teaching, and teaching with multi-media tools, and to collaborate on the development of course materials**, such as writing and research guides.

Table 64 shows that the common purposes of individual consultations are to provide one-to-one meeting to discuss the design of undergraduate courses and graduate seminars in general education as well as innovative pedagogy and the development of course materials. All these topics to be covered during individual consultations promote curriculum development.

Faculty learning communities

Faculty learning communities is another main service that is found to be a supportive factor to curriculum development. Table 65 shows the list of the purposes of faculty learning communities aiming at curriculum development.

Table 65
Faculty learning communities

Main Service	Purpose(s)
Faculty Learning Communities	to **improve and enhance education in STEM fields on campus**. The working group is both a **learning community and an advisory group to senior campus leadership**. (The STEM Curriculum Working Group)
	to provide **a year-long support for a group of faculty working together to implement a curricular change in a program or department,** infusing **instructional technologies into the curriculum to improve teaching and learning.**
	to lead the activities and setting up regular events **through UCL Arena for debate and discussion as well as sharing inspirational practice (Connected Curriculum)**
	to provide links to learn more, resources, key people, get involved, research and teaching, **curriculum inspiration, conference, FAQs, challenges and solutions**
	to ensure **that all students are able to learn through participating in research and enquiry at all levels of their programme of study**.
	to **help contextualise The Connected Curriculum through curriculum studies** to understand **good practice that already exists and share that in order to inspire curriculum improvements.**
	to **collaborate and make innovations to enhance the learning experience through the ChangeMakers program** (the program that focuses on curriculum studies)
	to **foster internationalisation in the course content** (e.g. syllabus, teaching methods, assessment, reading lists and research), **different world-views on the subject, its global impact and ethical issues and case studies through curriculum studies that also serve as research projects for undergraduates**
	to **list FAQs abut connected curriculum**

Table 65 shows that development centers support faculty learning communities that gather around a common interest, curriculum development, such as the STEM Curriculum Working Group striving to improve and enhance education in STEM fields on campus, Connected Curriculum leading the activities and setting up regular

events through UCL Arena for debate and discussion as well as sharing inspirational

practice, UCL ChangeMakers Program for collaborating and making innovations to

enhance the UCL learning experience. In addition, another FCL aims to foster

internationalization in the course content by adding different world-views on the

subject, analyzing its global impact and ethical issues.

Grants

Grant is another main service having multiple purposes. It also supports curriculum

development. Table 66 lists these main services along with the purposes.

Table 66
Grants

Main Service	Purpose(s)
Grants	to **make available funds to carry out curriculum enrichment efforts that are meaningful and achievable.** to **make curriculum enrichment projects possible** at the department/program level that may involve curricular revision or the introduction of new curricular components that address a specific need or opportunity.
	to **develop faculty members' expertise in advising program evaluation and assessment and to develop and/or strengthen assessment activities in advising units.**

As Table 66 indicates, grant services aim to make available funds to carry out

curriculum enrichment efforts and to make curriculum enrichment projects possible.

In addition, they aim to develop faculty members' expertise in advising program

evaluation and assessment.

Self-study

The results show that there is one self-study resource for improving organizational

development. Its purpose is listed in Table 67 below.

Table 67
Self-study

Main Service	Purpose(s)
Self-study	to serve as a **resource for faculty, who are interested in proposing a course for diversity credit or who are seeking resources to mount a diversity-related course**.

One of the universities offers a web page to serve as a resource for faculty, who are interested in proposing a course for diversity credit or who are seeking resources to mount a diversity-related course. Since faculty can reach information and resources for adjusting syllabus of his/her course easily via the web site, this service is considered as self-study resource promoting curriculum development.

Workshops

As part to STEM education research, *Searle Center for Advancing Learning and Teaching Center* offers workshops, publications as well as grant-funded projects with the aim of improving STEM education. Table 68 focuses on the purposes of workshops enabling organizational development as the center initiates all these studies

Table 68
Workshops

Main Service	Purpose(s)
Workshops	to **collaborate regularly with departments and programs on campus and beyond to create research-driven evidence aimed at improving STEM education**
	to **offer a complete list of grants, publications, and presentations related to STEM Education research.**

Table 68 presents that teaching-learning centers offer workshops so as to collaborate regularly with departments and programs on campus and beyond to create research-driven evidence aimed at improving STEM education. The fact that the center organizes workshops and coordinates grants as well as presentations contributes to the organizational growth of the center.

Others: Professional development

During the data analysis, the researcher encountered some services whose missions

do not fall into the Robertson's (2010) categorization (faculty development,

instructional development, organizational development and curriculum

development). These services offered by the centers aim to support students

academically and professionally. The researcher labeled them as "professional

development" and "academic development". Firstly, the purposes of services that

support professional development of students were analyzed one by one.

Career support

Career support is one of the main services aiming at professional development. Table

69 shows these services and their purposes below.

Table 69
Career support

Main Service	Purpose(s)
Career support	to **connect students with alumni and community partners who are successful entrepreneurs in a variety of co-curricular programs**. to **give students opportunities to learn the basics of startup thinking.**
	to advocate for **sustainability and social justice through media-focused teaching and research through the Academy for Social Purpose in Responsible Entertainment (ASPIRE)** to **teach digital media production to undergraduates of all majors to enhance their lifelong capacities to undertake social issue advocacy.**
	to give detailed information about **Aspire, Courses, Student Work, Faculty, Media for Social Change Student Contest, Speaker Series, Press, Donate, Contact Information**
	to assist graduates in **writing a teaching philosophy**
	to offer **SETTA that can be taken once every 12 months by students to fulfil the Language Proficiency Requirements for Teaching Assistants** to offer contact link and schedule
	to inform **about Instructor and TA Positions, Extra-Departmental Teaching Positions, Teaching Opportunities in Single Session Classes, Tutoring and Mentoring Opportunities, Other Teaching-Related Opportunities and Non Affiliated Teaching and Tutoring Opportunities**
	to offer **graduate students who are interested in opportunities to teach other than, or in addition to, an appointment as an Assistant in Instruction**. As a service, the McGraw Center compiles a list of such opportunities.
	to help **graduate students and post-docs who wish to study for a degree, undertake a doctorate programme, study for a professional, job-related qualification through the Study Assistance Scheme**

Table 69 shows that some services are offered to give graduate students the

opportunity to improve themselves professionally so that they can be successful in

their future career path. In order to do that, centers connect students with alumni and

community partners who are successful entrepreneurs in a variety of co-curricular programs so that students can learn the basics of startup thinking, offer *the Academy for Social Purpose in Responsible Entertainment (ASPIRE)* for enhancing their lifelong capacities to undertake social issue advocacy and teaching digital media production, assist graduates in writing a teaching philosophy, offer SETTA that can be taken once every 12 months by students to fulfil the Language Proficiency Requirements for Teaching Assistants, offer available teaching, tutoring and mentoring positions and Study Assistance Scheme which can enable students to find the best career path for themselves. Overall, the purpose of these services is to support students in various ways to improve their professional skills so that they can use these skills to shape their career path.

Community service

Community service is another main service aiming at professional development of the students. Table 70 shows this main service, its purposes and missions.

Table 70
Community service

Main Service	Purpose(s)
Community service	to provide students with a **core analytical and theoretical framework for community building, governance, and the use of civic resources through The Civic Engagement Minor Program.**
	to offer links to home, faculty, students, minor requirements, apply to the minor, contact info, give now
	to provide **in service learning courses through which students learn through active participation in thoughtfully organized work within the community that is connected to academic, credit-bearing courses.**
	to offer **List of Spring 2016 community service courses, course descriptions, videos and service learning in the community**
	to **promote literacy among preschool students with the contributions of undergraduates (AmeriCorps)** to provide students with the opportunity to **serve the community for a year**
	to **provide equal access to justice for those who cannot afford an attorney. Students are trained and supervised by attorneys.**
	to offer FAQs about the **internship courses**
	to present A list of 2015-2016 community service programs and courses

Table 70 (cont'd)
Community service

Main Service	Purpose(s)
Community service	to offer links for **Service and Outreach Learning, The Student Service Learning Experience, Current Placement Opportunities, How to Apply, Create your own placement, Information for Community Partners, Information for UTSC Instructors, Related Links, Student Success Stories**
	to support the work of a select group of students who will conduct **research on civic engagement during their senior year through The Astin Scholars Program**
	to **provide students with a core analytical and theoretical framework for community building, governance, and the use of civic resources through Civic Engagement program courses**
	to offer **disability studies as a community service course**

As Table 70 shows, some centers offer students the opportunity to serve to community in various ways; either by participating to an internship or community service programs or taking some credit-bearing courses. These programs are *The Civic Engagement Minor Program* through which students gain the skills of core analytical and theoretical framework for community building, governance, and the use of civic resources, *AmeriCorps Program* that promotes literacy among preschool students with the contributions of undergraduates, *The Astin Scholars Program* that supports the work of a select group of students who will conduct research on civic engagement during their senior year and *Civic Engagement Program* through which students work on a core analytical and theoretical framework for community building, governance, and the use of civic resources through. Moreover, some internship opportunities and community service courses are offered for students. Consequently, the overall purpose of all these services is to provide students with the chance to give back to the community through several projects.

Courses

Courses are also among the main services that carry out the mission of professional development of the students. Table 71 shows these services and their purposes below.

Table 71
Courses

Main Service	Purpose(s)
Courses	to provide a select group of juniors and seniors with the opportunity **to develop and facilitate, under close faculty supervision, a lower division seminar for their peers (Undergraduate Student Initiated Education (USIE))**
	to **offer information about spring 2016 information sessions, sample classes designed and taught by students, how to apply, faculty mentors, courses, FAQs, contact**
	to **serve as a resource to both students and community partners who are interested in participating in one of the philanthropy lab courses currently offered through the Honors Collegium, Civic Engagement, or Disability Studies programs.**
	to **inform students about courses, application process, FAQ for community partners: how to participate, past grant awardees, faq, for course alumni, media, contact**
	to **offer programs for graduate student professional development in teaching, learning and scholarly communication**
	to provide **an opportunity for students to take a series of courses that focus on modern social and intellectual thought from the 17th through the 20th century through The Social Thought minor course**
	to **offer courses for students across the disciplines the opportunity to expand the scope of their academic engagement:** CTLA01H Foundations in Effective Academic Communication and CTLA02H Exploring Cross-Cultural Perspectives in Academic Contexts and CTLB03H Introduction to Service Learning

Table 71 demonstrates that the main purposes of all these courses is to enable

students to develop themselves professionally on various topics such as technology,

course design, teaching, learning and scholarly communication, community service

(*Honors Collegium, Civic Engagement, or Disability Studies)*, modern social and

intellectual thought from the 17th through the 20th century and service learning.

These courses enable students to grow themselves professionally on various topics

depending on their skills and interests.

Credit workshops

The Centre for Teaching and Learning of one of the universities organizes an annual

workshop series each year for the instructional and professional improvement of

graduate students who are parts of Graduate Professional Skills program (GPS).

Table 72
Credit workshops

Main Service	Purpose(s)
Credit Workshops	to **prepare graduate students for their future careers through emphasis on development of skills that are not limited to specific disciplinary programs.**
	to **benefit any students who seek to develop their preparation and credentials for later teaching responsibilities in their careers**.

Table 72 indicates that there are two credit workshops that support professional development. Their common purpose is to prepare graduate students for their future careers by providing them with an environment where they can improve their teaching skills and theoretical knowledge of teaching and learning through credit workshops.

Degree programs

A degree program refers to a course of study that leads to an academic degree. Below is the list of main services leading to professional development of students.

Table 73
Degree programs

Main Service	Purpose(s)
Degree Programs	to **offer a diploma program that is the second stage of a three-stage approach to the study of teaching and learning in the university setting.**
	to provide **training and support in education research methodology and allows participants to investigate and inform their practice with valid educational enquiry (MeD program)**.
	to **offer a range of taught programmes that provide an opportunity to study in a way that is centered on actual practice and takes account of both disciplinary and institutional context**
	to provide **links for supporting learning and teaching pathway, postgraduate certificate in university learning and teaching, postgraduate diploma in university learning and teaching ,Med in university Learning and Teaching**

Table 73 indicates that centers offer degree and certificate programs in teaching for students. Two degree programs aim to enable the attendants to obtain training and support in education research methodology and help them improve their pedagogical skills as well as their theoretical knowledge. In addition, they offer a range of programs that includes both theory and practice by taking account of both disciplinary and institutional context.

Faculty fellows

Faculty fellows are employees of faculty whose duties are to build relationships with the faculty and extend the influence of the center (Lee, 2010). Through the analysis,

the researcher encountered that there is an opportunity for graduate students to
become teaching fellows and categorized it as "faculty fellows". The purposes of this
main service are listed below.

Table 74
Faculty fellows

Main Service	Purpose(s)
Faculty Fellows	to **provide an opportunity for graduate students to advance their teaching and leadership skills while contributing to the pedagogical development of their peers through The Graduate Teaching Fellows (GTF) Program**
	to **contribute to a vibrant culture of teaching on campus and beyond through fellowship program**

Table 74 indicates that *the Graduate Teaching Fellows Program* provides a chance
for graduate students to improve their instructional skills as well as leadership skills
as they also contribute to their peers. It means that graduate students reflect on their
teaching experiences by sharing and exchanging ideas with their peers. The center
aims to contribute to" a vibrant culture of teaching on campus and beyond through
the fellowship program". Since this is a chance for graduate students to improve their
teaching and management skills, it is considered as" faculty fellows" main service
aiming at professional development.

Consultations

Individual consultation is another main service aiming at professional development
of students. Table 75 shows this main service together with the mission and purpose.

Table 75
Individual consultation

Main Service	Purpose(s)
Consultations	to **collaborate with graduate and undergraduate students to develop an individualized approach to learning**
	to **tailor consultations with students' specific needs and assist them properly for professional excellence**

Table 75 presents that individual consultation offer students with the opportunity to develop an individualized approach to learning and get assistance on their specific needs so that they can reach professional and academic excellence.

Instructional technology

Instructional technology plays a significant role in the initiatives of centers. Instructional support is not only offered for instructors, faculty or departments, but also students. Table 76 lists the purposes of instructional technology services for students.

Table 76
Instructional Technology

Main Service	Purpose(s)
Instructional Technology	to **provide an environment where students can engage in flexible learning, anytime, anywhere. Participating lectures are video recorded and made available for them to view online as internet video within 24 hours of the live lecture.**
	to **offer online non-degree programs, MOOCs, Seminars, Lifelong Learning, videos for students on different areas of professional development**

Table 76 shows that centers offer online environments containing lecture videos, online programs, MOOCs, seminars and development videos for students so that they can access to the content they look for anytime they want. Thus, it can be assumed that technology provides a great convenience not only to faculty, but also to the students as they can engage in flexible learning anytime, anywhere.

Non-degree programs

Below is the list of the purposes of non-degree programs aiming at professional development.

Table 77
Non-degree programs

Main Service	Purpose(s)
Non-degree programs	to **inform** graduate students about **Graduate Teaching Assistants (GTA) Program** (engineering specific training for research students)
	to **help assistants improve their skills and knowledge in the areas of practical and small-group teaching**, in which aspects of preparation, student learning and motivation, and assessment and feedback are considered to **have access to teaching specialists to help support their teaching** to **get awareness of resources**

There is one non-degree program as main service whose mission is professional development and its purpose is to help graduate students of engineering to improve their skills in the areas of practical and small-group teaching, get in touch with teaching specialists who help support their teaching and access to resources. In conclusion, this program supports the professional development of graduate students as future instructors of engineering department.

Orientations

Orientation is a main service that has multiple developmental missions. It also promotes professional development. Table 78 shows these main services below.

Table 78
Orientations

Main Service	Purpose(s)
Orientations	to **offer summer orientation, courses, tutorials as well as The Conversation Partner Program for international students**
	to list of programs and services for students: **specialized undergraduate teaching assistants (UTA) orientation, summer workshops, programs for peer tutors, educational outreach programs.**
	to **help prepare newly appointed international TAs for their roles as graduate Teaching Assistants, and to assist them while they are teaching**.
	to **offer links for international TAs, for faculty working with international TAs, for departments employing international TAs.**
	to **inform about life as a doctoral student, international students and ensuring inclusivity**
	to **support graduate students and post-docs in all stages of their teaching careers from training for their first teaching experiences through preparation for the academic job market.**
	to help **non-native English speaking graduate students become fully integrated into the academic community at Princeton**.

As Table 78 indicates, centers conduct orientations for undergraduate students, graduate students, international graduate students, post-docs, TAs and international TAs so that they can improve themselves professionally on various areas. For

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instance, international students can get summer orientation, courses and tutorials as

well as the *Conversational Partner Programs* to practice their English. In addition,

specialized undergraduate teaching assistants can get orientation through summer

workshops, programs for peer tutors, educational outreach programs. Newly

appointed international TAs are also offered several orientation services.

Orientations are offered for supporting doctoral students and post-docs inn all stages

of their teaching careers. Overall, these programs serve as support for professional

development of these students by the centers.

Self-study

The data analysis shows that there is only one main service functioning as a self-

study resource for students and that this source aims at professional development.

Table 79 reveals the data about this main service.

Table 79
Self-study

Main Service	Purpose(s)
Self-Study	to **offer resources for learning library, related links, Productivity, creativity and getting things done (links), campus resources for independent work**

Table 79 shows that there is one main service that can be categorized as self-study

with the mission of professional development. As it can be clearly seen, the purpose

of this main service is to provide links for learning library, productivity, creativity

and getting things done (links) and campus resources for independent work. These

resources are available for all students.

Workshops

The researcher encounters that some of the workshops promote professional development of students and categorizes them as workshops aiming at professional development. Table 80 lists the missions and purposes of these workshops.

Table 80
Workshops

Main Service	Purpose(s)
Workshops	to offer **a series of hands-on, active, and process-focused workshops in which students learn and apply strategies designed specifically for the highly demanding context**. to **emphasize advanced and innovative techniques for purposeful and efficient learning.**
	to **explore presentation skills** through workshops
	to prepare graduate students **for a career in academe to present videos of previous sessions** to **build upon the training received during teaching by providing a venue for discussing and addressing the prospects and challenges of the first teaching assignment.** to **prepare TAs for future teaching career through The Preparing Future Faculty Series** to **discuss examples of collaborative exercises that were designed to meet specific learning goals**
	to offer **a year-long teaching seminar for graduate students** to provide a unique environment, particularly important in a research university, for participants to focus intensively on **the goals and practices of teaching as well as the challenges encountered by their undergraduate students as they confront the assumptions and conventions of disciplines across the curriculum**.

As Table 80 shows, professional development workshops for students include a series of workshops on advanced and innovative techniques for purposeful and efficient learning, workshops on various areas such as presentation skills, The Preparing Future Faculty Series for TAs and year-long teaching seminar for graduate students. Two purposes are similar as they stand as environments where TAs can discuss and address the goals and practices of teaching with their peers. In addition, one center offers workshop series on different development areas such as presentation skills or management skills. Lastly, The McGraw Center for Teaching and Learning offers a series of hands-on, active, and process-focused workshops for students who are interested in learning about advanced and innovative techniques for purposeful and efficient learning.

Others: Academic Development

Some centers offer academic support services for students, especially undergraduate students so that they can cope with the demanding university life. The researcher offers the purposes of each main service under the category of academic development by following the same procedure as other development categories.

Courses

During the data analysis, the researcher encounters that some courses promote academic development of undergraduate students and categorizes them as courses whose mission is academic development. Table 81 shows their missions and purposes below.

Table 81
Courses

Main Service	Purpose(s)
Courses	to **improve the range and proficiency of undergraduate writing skills through Writing I and Writing II courses**
	to **discuss the lecture material and important concepts, develop study strategies, and practice testing themselves on course material to prepare for their assignments and tests through weekly, voluntary Facilitated Study Groups (FSGs)**.
	to offer **the fundamental ideas and intellectual activities that scholars across campus -** scholars in the arts, the humanities, the social sciences and natural sciences - draw on in their work through General Education course
	to provide **peer-assisted weekly study sessions to improve student success in traditionally difficult academic courses**. to **enable students to gain the ability to synthesize ideas and formulate questions regarding course content and material and, ultimately, assume responsibility for their own learning**. (Supplemental Instruction (SI))
	to **help students make the transition from school to university, cope with academic work, enjoy extracurricular activities and enhance their career prospects through courses**
	to **offer a sequence of three classes for undergraduates who are interested in becoming K-12 science and math teachers**

Table 81 indicates that development centers offer courses that support students who need academic support. Some of them offer support on writing skills whereas others provide peer-assisted weekly study sessions to improve student success in traditionally difficult academic courses, which is offered for specific courses that students have difficulties. In addition, some courses are more general, aiming to help

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students make the transition from school to university, cope with academic work,

enjoy extracurricular activities and enhance their career prospects through courses.

The Teacher Education Program (TEP) offers courses for a sequence of three classes

for undergraduates who are interested in becoming K-12 science and math teachers.

Through these lessons, students have the chance to improve their academic expertise

to become effective teachers in the future.

Although these courses have various purposes as stated above, their common

purpose is to support undergraduate students on areas they need academic

development and improvement.

Degree programs

One of the main services is categorized as degree programs for academic

development. Below is Table 82 which shows the mission and purpose of this main

service.

Table 82
Degree programs

Main Service	Purpose(s)
Degree Programs	to **offer international studies with degree programs, courses and internship opportunities**

Table 82 indicates that there is one main service categorized as degree program for

students. This service offers international studies at Madison with degree programs,

courses and internship opportunities. It also provides detailed description of graduate

programs, courses and internships on international studies. Since all of these services

are offered by the center itself, it can be assumed that centers offer life-long learning

for people.

Consultations

Consultation is among the main services that have multiple developmental missions.

Below is Table 83 which shows the individual consultation as a main service with

the mission of academic development.

Table 83
Consultations

Main Service	Purpose(s)
Consultations	to **assist undergraduate students who are having difficulty in a humanities or social science course through individual consultation**
	to provide information about **residential college writing tutors and drop-in writing partners**
	to provide information about **science and QR tutoring program and residential college math and science and tutoring program**
	to **administer a variety of tests for students, to enable them to claim credit for UT courses in a number of disciplines, and answer questions about registration, exam types, and scheduled testing dates and locations through individual consultation**
	to **provide opportunity for students to join a quarter-long study group, find tutoring and drop-in help, find academic coaching, find campus resources to help you excel, get online advice for smart studying**
	to offer links for **academic advising**, academic integrity, academic success: campus resources, **academic support and tutoring**, computing and digital media resources, **how to get the most out of studying**, online courses, podcasts, writing and communication resources
	to **offer a separate web-site for graduate, undergraduate students and post-docs about student life**
	to **get individual help with academic writing from a writing specialist (for graduate students)**

As Table 83 demonstrates, the purpose of consultation services is to assist students

who have difficulty in certain courses (one center offers support specifically at math

and science students) and academic writing through individual consultation services,

quarter-long study groups, tutoring, academic coaching and individual help by a

writing specialist. In addition, some centers offer residential college writing tutors

and drop-in writing partners for undergraduate students who need assistance on

university level academic writing. Overall, it can be concluded that these

consultation services offer students one-on-one assistance and support on areas they

need to develop.

Instructional technology

Instructional technology is among the main services aiming at academic development. Table 84 lists the main services categorized as technology aiming at academic developments of students.

Table 84
Instructional technology

Main Service	Purpose(s)
Instructional Technology	to **assist students in using engaged learning Tools**: REAL, CCR, E2T, E-Portfolio
	to **offer Principedia which is an interactive, wiki "encyclopedia" aiming to gather, organize and circulate local knowledge about effective learning in the Princeton context.**
	to impart **context-specific methods of learning**--including approaches, strategies and techniques--rather than subject matter content as other wiki-encyclopedias do.

As Table 84 shows, centers offer instructional technology available for the use of students as a contribution to their academic growth. They assist students in using engaged learning tools called REAL, CCR, E2T, E-Portfolio and offer *Principedia*, an interactive, wiki "encyclopedia" aiming to organize knowledge about effective teaching and learning. This web site, as it is mentioned in the home page, is "designed for students by students" to engage all community, especially undergraduate students to the higher education environment by providing them a platform where they can share and collaborate on teaching and learning practices that take place in the institution. Thus, one can infer from the purposes listed in Table 84 instructional technology is offered for students to assist them in using e-learning tools as well as for engaging students to the university community through an online platform.

Orientations

Orientations are among the main services that carry out academic development mission. Table 85 shows orientation main services that are found to have academic development.

Table 85
Orientations

Main Service	Purpose(s)
Orientations	to **conduct orientation and courses following the evaluation of the proficiency levels of incoming graduate students who are non-native speakers of English** to **offer information about English Language Program(ELP) rating, ELP opportunities and requirements, follow up testing**
	to offer information about **discussion groups, English language program workshops and teaching in higher education context**
	to **help non-native English speaking graduate students become fully integrated into the academic community at Princeton through the English Language Program.**

Table 85 indicates that orientation programs are specifically for new graduate students so that they can get accustomed to the community through courses, orientation programs and workshops. Students get language proficiency test by *the ELP Program* and if their English level is under expectations, they can also have language support.

Self-study

Self-study resources are also designed for students to enable academic development. Table 86 lists self-study resources aiming at academic development.

Table 86
Self-study

Main Service	Purpose(s)
Self-Study	to offer **guidelines for principles of citing sources, understanding and avoiding plagiarism, citing books, citing articles, citing internet sources, citing miscellaneous sources**
	to offer **information about what good writers know, writing handouts, model writers from the disciplines, student publications, the WR requirement, junior and senior essays, creative writing, journalism initiative, advice for ESL writers**
	to share **tips for creating a teaching portfolio, resources**
	to offer links to **components of a teaching portfolio and academic job interviews**
	to inform about **Individual Writing Consultations, Peer-Review Groups, Writing Bootcams and Study Halls, Writing Workshops, Seminars and Panels, Writing through Graduate School, Graduate Writing Advisors Program**

Table 86 shows that self-study resources aim to serve as guidelines for students on many academic areas such as principles of citing sources, understanding and avoiding plagiarism, citing books, citing articles, citing internet sources, citing miscellaneous sources, a wide range of writing assistance from junior and senior essay writings to creative writing, creating a teaching portfolio and related resources, getting prepared for academic job interviews and writing support through several programs and groups. These resources provide academic support for students through carefully organized and presented informative online resources.

Non-degree programs

Non-degree program is another main service that has multiple developmental missions. It also promotes academic development as stated in Table 87.

Table 87
Non-degree programs

Main Service	Purpose(s)
Non-degree Programs	to **offer a tutoring program where students can benefit from their peers as well as learn the principles of tutoring through a tutoring program**
	to offer **study tutoring, academic skill advancement, research preparation, leadership opportunities**
	to offer **graduate students and postdoctoral fellows** a year-long sequence of interdisciplinary seminars, special-topics workshops, and **peer and faculty mentoring, focused on improving student learning in their disciplines through The Teaching Certificate Program**

Table 87 shows that non-degree programs offered by the centers share similar purposes: enabling students to develop their tutoring and mentoring skills so that they can benefit from their peers as well as improve their academic skills and leadership opportunities. In addition, one of the centers offer peer and faculty mentoring where graduate students and postdoctoral fellows can focus on improving student learning in their disciplines through *The Teaching Certificate Program*.

Research

Some research projects conducted by the development centers can include undergraduate students. Table 88 shows the main service categorized as research projects for undergraduate students.

Table 88
Research

Main Service	Purpose(s)
Research	to increase **opportunities for undergraduate students to get involved in research activities as part of their studies through research-based education**
	to **provide the chance for students to play an active part in the research processes**

Table 88 shows that research as a main service aiming at academic development is offered for students to enable them to get involved in research activities as a part of their studies through research-based education. By playing an active part in research programs, students can develop their research skills and increase their subject-area expertise. However, it can be inferred that it is not a common service aiming at academic development.

Teaching

Teaching is surely one of the most effective elements for academic improvement in higher education. However, in the context of academic development of students, it is a term used to describe the teaching activities in which undergraduate students take part. Table 89 shows the list of teaching supporting academic development.

Table 89
Teaching

Main Service	Purpose(s)
Teaching	to **offer PAL (peer-assisted learning) where volunteer second-year students are trained and paid to help students on the same course in the following year.**
	to help **second-year students improve their understanding of the subject matter and work through common problems and further develop their learning strategies.**
	to **help freshmen to settle into university life**.

As Table 89 indicates the purpose of this service, PAL (peer-assisted learning) is that volunteer second year students develop their academic skills by paid-teaching and tutoring to freshmen while freshmen can adapt themselves to academic life thanks to peer-support.

Tutoring

Academic tutoring refers to support for students in a broad sense; identifying student need on all areas and assisting students for planning and recording their academic, professional and career development. Sometimes development centers can organize tutoring services for students. These services are not always that comprehensive, but rather subsidiary for personal tutoring. The purposes of these services are listed in Table 90.

Table 90
Tutoring

Main Service	Purpose(s)
Tutoring	to offer information about **residential college writing tutors, drop-in writing partners**
	to support **student learning at any stage in the writing process, from planning an outline to polishing a final draft through the Writing Center which offers tutoring and individual consultation**
	to **help students communicate more effectively for their academic needs; to confidently participate in classes, tutorials and campus life; and, to equip students with strategies and tools to participate actively in the academic community through English Language Development Centre (ELDC)**
	to provide **free seminars, workshops, virtual tutoring, individual appointments, and small-group consultations to improve students' proficiency in various subjects of mathematics and statistics (The Math and Statistics Learning Centre (MSLC))**

As Table 90 indicates, tutoring support can be given on various topics by different units such as the Writing Center, the English Language Development Centre and the Math and Statistics Learning Centre. These services are offered to support student learning in writing process, communication, participation to the courses and academic community through language support and to improve students' proficiency in various subjects of mathematics and statistics through free seminars, workshops,

virtual tutoring, individual appointments, and small-group consultations by the Math and Statistics Learning Centre. It can be claimed that these tutoring services contribute to the academic development of students by offering them one-on-one aid and assistance on the areas they need to survive and excel in academic environment.

The results show that each service offered by the centers serve to different purposes within the classification of faculty development areas by Robertson (2010). By looking at the purpose tables, one can conclude that services offered may not have purposes peculiar to only one development area; rather most of them have multiple developmental purposes.

CHAPTER 5: DISCUSSION

Introduction

This chapter provides an overview of the study and then discusses the results within the framework of Lee's classification of services (2010) and Robertson's (2010) conception of faculty development so as to offer a platform for future faculty development center implementations in Turkey and beyond.

Overview of the study

This study aims to explore the most commonly offered faculty development main services offered by the development centers of the top twenty-eight universities listed by the US World News and Rankings (2016) through the content analysis of center web sites and to develop a typology of main services and purposes for faculty development purposes by using Lee's (2010) categorization of services and Robertson's (2010) classification of faculty development as lenses. to this end, the study aimed to answer the following research questions:

1. What main services do the faculty development centers of top twenty-eight universities offer within the framework of Lee's classification of services?

2. What purposes do the main-services pursue within the framework of Robertson's classification of developmental purposes?

3. How do the main services and purposes inform the development of a typology of services and purposes?

Typological classification of main services

There are about twenty-eight areas of main service (Table 91). The analysis of the

web pages of development centers of the top universities indicate that they all focus

on the areas of faculty, instructional, organizational and curricular development. The

analysis also reveals that the centers also provide support for academic and

professional development of students. The typology matrix below, based on the

results of the study, maps out the areas of main services and developmental focus.

Table 91
Areas of main services

	Developmental focus				
	Faculty	**Instructional**	**Organizational**	**Curricular**	**Academic and professional development of students**
Career support	✔		✔		✔
Consultation	✔	✔	✔	✔	✔
Courses	✔	✔	✔		✔
Faculty learning communities	✔	✔	✔	✔	
Mentoring	✔				
Non-degree programs		✔			✔
Publications	✔		✔		
Research	✔				✔
Self-study	✔	✔		✔	✔
Tutoring	✔				✔
Workshops	✔	✔	✔	✔	✔
Awards		✔			
Community service		✔			✔
Credit-workshops					✔
Evaluation of Teaching		✔			
Faculty fellows		✔			✔
Grants		✔		✔	
Instructional technology		✔	✔		✔
Management of grant funded projects			✔		
Orientations		✔	✔		✔
Planning		✔			
Teaching		✔			✔
Testing-grading		✔			
Community-campus partnership			✔	✔	

Table 91 (cont'd)
Areas of main services

	Faculty	Instructional	Organizational	Curricular	Academic and professional development of students
Donations			✓		
Engagement in National Projects			✓		
Speeches			✓		
Degree programs					✓
	10	16	13	6	15

There is a total of sixteen areas under the category of instructional development, and there is a total of six areas for curricular development. In addition, academic and professional development of the students has a total of fifteen areas and faculty development has a total of six areas. Thus, one can infer from the table 96 that the teaching-learning centers of the top twenty-eight universities have the tendency of focusing instructional development the most whereas they put less emphasis on curriculum development.

Main services for faculty development

There are ten areas of main service identified for faculty development (Figure 6).
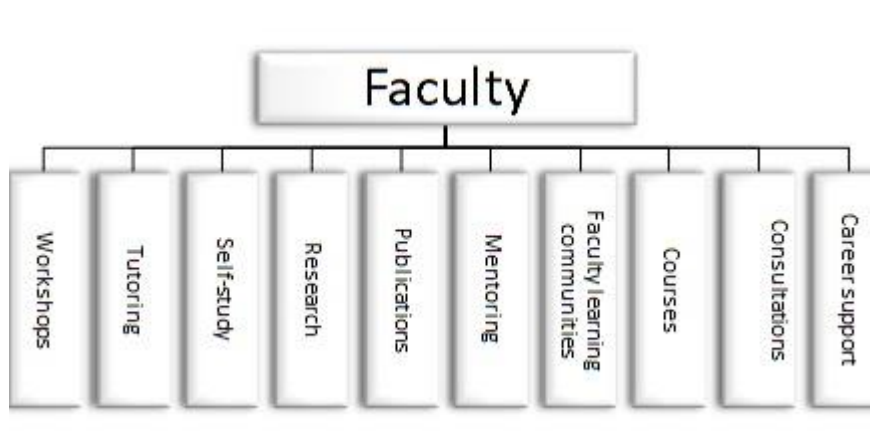
Figure 6. Main services for faculty development

Faculty development mainly focuses on the improvement of teaching and research skills, and helps faculty members with all aspects of faculty work (Robertson, 2010). The centers analyzed enhance these skills and work, and some centers additionally provide career support, faculty learning communities, self-study opportunities and self-study.

Main services for instructional development

There are sixteen areas of main service identified for instructional development (Figure 7).
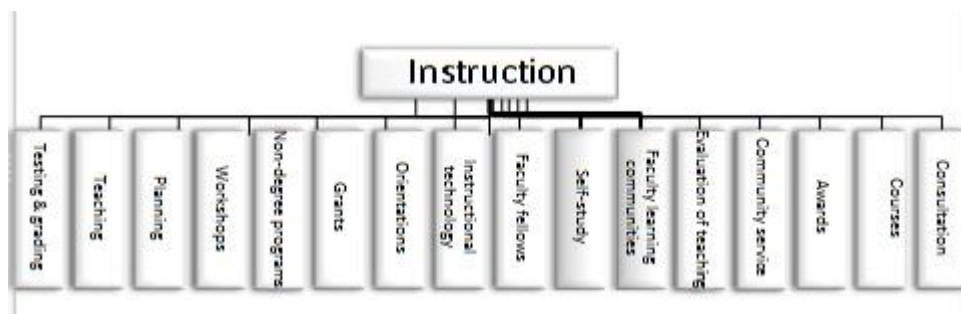
Figure 7. Main services for instructional development

Instructional development mainly focuses on teaching better and improving student learning (Robertson, 2010). The centers analyzed provide opportunities for such means, and some provide additional services such as testing and grading and using instructional technology.

Main services for organizational development

There are thirteen areas of main service identified for organizational development (Figure 8).

```
                    ┌─────────────────────┐
                    │    Career support   │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │     Consultation    │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │       Courses       │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │  Faculty learning   │
                    │    communities      │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │    Publications     │
  ┌──────────┐      └─────────────────────┘
  │          │      ┌─────────────────────┐
  │  O       │      │      Workshops      │
  │  r       │      └─────────────────────┘
  │  g       │      ┌─────────────────────┐
  │  a       │      │    Instructional    │
  │  n       │      │     technology      │
  │  i       │──────└─────────────────────┘
  │  z       │      ┌─────────────────────┐
  │  a       │      │ Management of grant │
  │  t       │      │   funded projects   │
  │  i       │      └─────────────────────┘
  │  o       │      ┌─────────────────────┐
  │  n       │      │    Orientations     │
  │  a       │      └─────────────────────┘
  │  l       │      ┌─────────────────────┐
  │          │      │  Community-campus   │
  └──────────┘      │    partnership      │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │      Donations      │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │    Engagement in    │
                    │   national projects │
                    └─────────────────────┘
                    ┌─────────────────────┐
                    │      Speeches       │
                    └─────────────────────┘
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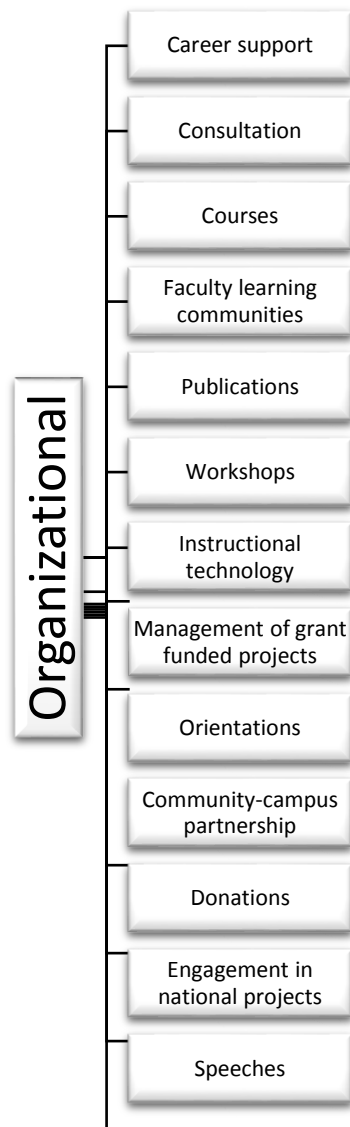
Figure 8. Main services for organizational development

Organizational development mainly focuses on effectiveness of units in an institution
and institutional learning (Robertson, 2010). The centers analyzed provide many
means for organizational development. Organizational development of a center
occurs at many levels; it ranges from its partnerships with the community, donations,
engagement in national projects to technological advancements.

Main services for curricular development

There are six areas of main service identified for curriculum development (Figure 9).
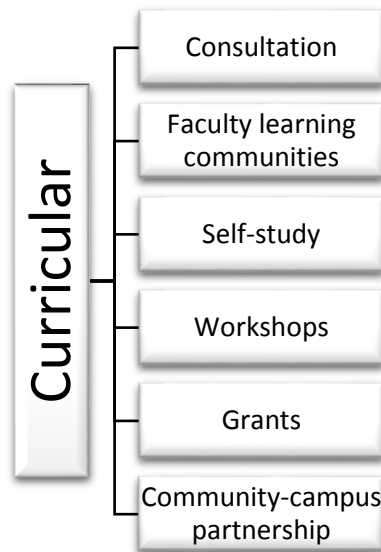
Figure 9. Main services for curricular development

Curriculum development mainly focuses on facilitating instructional design and integration of goals, activities and assessment at course and program levels (Robertson, 2010). Centers analyzed provide opportunities for such means through several ways as shown in Figure 9.

Main services for academic and professional development of students

There are fifteen areas of main service identified for academic and professional support for students (Figure 10).
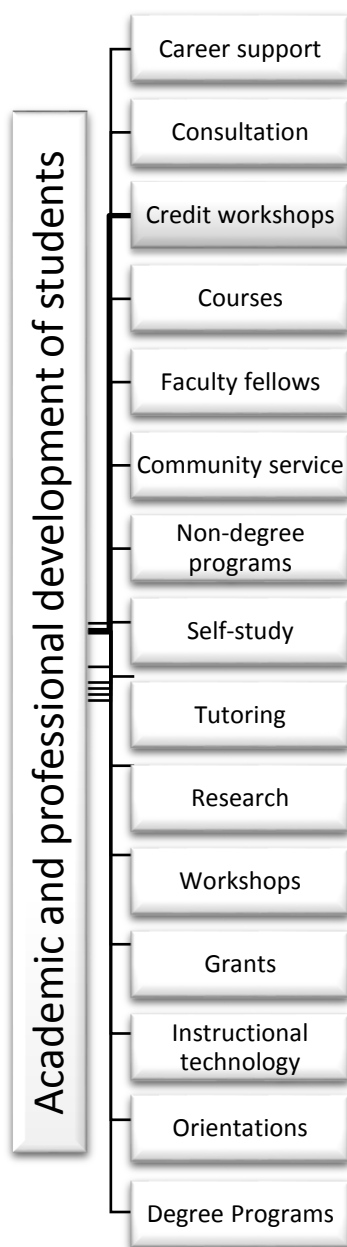
Figure 10. Main services for academic and professional development of students

The centers analyzed also provide service for academic and professional support for

students. This support includes a wide range of areas that enable students to possess

the academic skills necessary for academic environment through courses, workshops,

consultation sessions and professional skills through career support, workshops,

community service and technology support.

Typological classification of main services and purposes

Career support

Career support initiatives mainly focus on faculty and organizational development, but they tend to put more emphasis on providing academic and professional support for students. The purposes of faculty development include introducing professional development review schemes, providing a network and advice for internal job application procedures, providing information about tenure and promotion rules, and offering developmental opportunities. Organizational development mainly focuses on job opportunities.

Table 92
Typological classification of purposes for career support

I.	**Faculty**
a.	to offer support to departments and individuals in introducing professional development review schemes to suit their needs
b.	to provide a network that will be helping anyone who is a member of administrative or support staff and who is looking for confidential, impartial advice about an internal job application or a job interview or with rewriting their CVs.
c.	to inform faculty about New Teaching Assistants Workshop leaders, graduate teaching mentors, graduate teaching fellows, teaching-as-research program, graduate associate
d.	to give information about tenure and promotion rules and process through several links.
e.	to invite faculty and instructors interested in discussing strategies about how the cultural identities of faculty of color and those from international backgrounds inform their professional lives and to provide grants for their academic studies
f.	to offer development opportunities to maximize the potential of postdocs and fellows through the Post-Doc Development Center
II.	**Organization**
a.	to offer job opportunities and advertisements under different categories: faculty opportunities, and student and postdoctoral fellows
b.	to provide the list of current job opportunities for the center
III.	**Academic and professional development of students**
a.	to connect students with alumni and community partners who are successful entrepreneurs in a variety of co-curricular programs.
b.	to give students opportunities to learn the basics of startup thinking.
c.	to assist graduates in writing a teaching philosophy
d.	to advocate for sustainability and social justice through media-focused teaching and research
e.	to teach digital media production to undergraduates of all majors to enhance their lifelong capacities to undertake social issue advocacy.
f.	to give detailed information about programs, courses, contests, series, donations,
g.	to offer spoken English tests to fulfil the language proficiency requirements for teaching assistants (TAs)
h.	to offer contact links and schedules
i.	to provide information about instructor and TA positions, teaching opportunities, tutoring and mentoring opportunities
j.	to offer graduate students who are interested in opportunities to teach other than, or in addition to, an appointment as an assistant in instruction.
k.	to help graduate students and post-docs who wish to study for a degree, undertake a doctorate programme, study for a professional, job-related qualification

As for academic and professional support for students, its purposes include helping graduate students and post-docs who wish to study for a degree, connecting students with alumni and community partners, advocating for sustainability and social justice, and teaching digital media production for undertaking social issue advocacy. Career support initiatives of the top universities provide self-study resources and opportunities for self-directed, collaborative and online learning. They provide platform for access to information, enhancing computer literacy skills, contacting fellow learners, experts and graduates as entrepreneurs, and social issue advocacy.

Consultations

Consultation initiatives mainly focus on all developmental areas, but they seem to put more emphasis on instructional and organizational development. The purposes of faculty development include providing links among departments, informing faculty on professional development opportunities and pre and post-awards grant management on sponsored research as well as supporting faculty on being an effective TA mentor.

The purposes of instructional development focus on course and material support for faculty, department visits to discuss teaching topics of special interest to faculty members, information regarding teaching and mentoring related topics for faculty and instructors through web sites, teaching-learning support on any issues they need and general support through workshops, seminars and individual consultation. The centers support all faculty by offering one-on-one consultation sessions upon request or on regular basis so as to provide instructional support on a wide range of areas from designing a course to teaching a course. Instructional development aims to

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facilitate department visits to department visits to discuss teaching topics of special interest to faculty members, and encourage regularly scheduled faculty meetings or a lunch time departmental discussions. They also offer academic advising contacts, general support services, and design programs and services depending on faculty's needs, offer self-study resources on teaching and learning-related issues for instructors and informative web pages on the centers' instructional initiatives.

Curriculum development initiatives include collaboration with faculty on general education courses and graduate seminars in general education as well as material development and innovative pedagogy. Academic and professional support initiatives provide consultation support to all students on courses that they have trouble, writing support, academic advising, academic coaching and orientation to academic life.

Table 93
Typological classification of purposes for consultations

I. Faculty

Links
a. to provide links among departments
b. to provide links for online handouts on pocket guide for leadership skills, leading people through change, managing challenging interactions, tips on managing a meeting or leading a committee
c. Grants
d. to help faculty understand pre-award and post-award grants management on sponsored research brief guide to the various components of responsible conduct of research (RCR).
e. Advising
f. to support faculty on several topics such as being proactive, efficient, and effective, organizing elements of the course, leading groups of TAs, managing TA meetings, effective grading in large courses, and professional development.

II. Instruction

Courses and materials
a. to provide consultation on designing reading and composition (r&c) course, teaching r&c course, teaching argumentative writing, resources for non-native English speakers, handbooks and web resources
b. to collect audio, video and educational course materials from schools, departments, libraries and other programs across the university on Itunes: getting started, course manager, creating album artwork, Itunes application .
c. to routinely assists members of the university community with course design, section planning, effective use of technology, assignment development, mid-semester classroom observations and feedback, interpreting student evaluations, and addressing challenges in the classroom
d. to inform about integrated aligned course design

Table 93 (cont'd)
Typological classification of purposes for consultations

e.	to respond to requests concerning teaching, course design and student learning. These non-evaluative consultations may address any number of topics, including but not limited to: preparing a syllabus; trying out new approaches or techniques in lecture, lab, or precept; or improving classroom dynamics.

Visits/meetings

f.	to visit departments to discuss teaching topics of special interest to faculty members, and to provide an overview of the center's wide range of teaching resources
g.	to offer a department programming request form
h.	to join a regularly scheduled faculty meeting or a lunch discussion in departments
i.	to invite departments to hold a faculty meeting

Information

j.	to provide instructors with information that can help them know how to assist students with diverse needs
k.	to provide resources through links about planning lectures, delivering lectures, evaluating lectures, resources and credits
l.	to provide information about mentoring fund, application form, contact information for consultation and departmental teaching conversations
m.	to sort events by target audience
n.	to demonstrate a complete list of grants, publications, and presentations related to learning communities research
o.	to inform about surviving group projects

Teaching/learning

p.	to provide instructors with information that can help them know how to assist students with diverse needs
q.	to offer departments consultations on any aspect of teaching or student learning
r.	to work with departments to create customized workshops and program consultations
s.	to provide consulting for faculty and graduate student instructors in three professional areas: teaching, assessment, and technology
t.	to provide some recommendations for implementing active learning in classroom.
u.	to explore the nature and effects of educational technology
v.	to provide free advice and assistance to instructors and support staff.
w.	to provide information, advice, examples of best practices, and inspiration to those using or thinking about using the exciting and challenging learning environments
x.	to provide opportunity to discuss with peers teaching strategies in relation to course learning goals

Support: Workshops, seminars and individual consultations

y.	to offer several training and development options for faculty interested in learning more about instructional technologies: scheduled workshops and events, open office hours and office visits, custom training sessions, consultation
z.	to design workshop or teaching discussion in home department
aa.	to offer faculty programming and services including: individual support, seminars, workshops and other opportunities, institutes, junior faculty program, grants, annual conference
bb.	to offer services for departments, such as customized workshops and consultations
cc.	to provide tailored programs and services designed to suit faculty's needs and save time
dd.	to provide programs for instructors at all levels to support their success in teaching.
ee.	to set up a one-on-one consultation and a workshop for a department or group on campus
ff.	to inform about the possible topics for individual consultation.
gg.	to provide confidential feedback on teaching with an individual teaching consultation for new and experienced faculty.
hh.	to provide consultation on creating a teaching statement
ii.	to provide feedback on teaching demos
jj.	to gather the feedback instructors want and need
kk.	to collect clear, actionable/constructive and confidential feedback from students on classroom instruction or curriculum
ll.	to provide individual consultation on request
mm.	to observe a lecture, lab or precept and provide confidential, constructive feedback
nn.	to provide individual consultation sessions regarding classroom observations on request
oo.	to provide links for faculty-to faculty lunches, faculty teaching forum, conversations on teaching nursing, teaching seminars, faculty-to-faculty observation, workshops by request
pp.	to offer academic advising contacts, and general support services
qq.	to offer academic support on technology and research

III.   Organization

a.	to provide a list of people associated with the center

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Table 93 (cont'd)

Typological classification of purposes for consultations

b.	to present the information about the center's classrooms and contact information for appointment
c.	to state the history of the center
d.	to show the list of campus policies
e.	to give information about the library
f.	to present information about the center, its staff, groups, research, annual report, getting involved
g.	to offer a calendar that displays open events
h.	to give information about the collection of books
i.	to inform about the current and past directors
j.	to present library collection, TA evaluation form, teaching quality feedback reports, Massive Open Online Courses (MOOC), resources page,
k.	to provide information about what the center for community is
l.	to provide the interactive storymap and the consultation addresses so that grad students, undergrad students and faculty who are interested in community-engaged activities can contact
m.	to list brief CVs and motivation statements of student advisory board members
n.	to provide information about the faculty executive committee to provide general oversight of the academic programs in the College, Serves as an advisory
o.	to offer links to home, login, about, for departments: proposal guidelines and samples, course inventory management system, committee governance, senate websites, contact
p.	to provide information about the center, their approaches, programs and services
q.	to offer current news about the university, link to the older news, upcoming events and follow us section
r.	to list names and contact info with the pictures of staff: leadership, teaching initiatives and programs, educational technology and instructional design, software development and experience design, media production, technology, communications and outreach, administrative support
s.	to offer contact address
t.	to offer job categories with separate application links
u.	to offer general university resources under the headings of policies, administrative services, course admin, teaching support, office of provost, arts and sciences, professional schools, university medical center, affiliated institutions
v.	to offer consultation information for instructors, services for departments and programs
w.	to provide information about center for teaching and learning staff
x.	to provide information about the community, colleagues, community members and other visitors
y.	to present calendar of events
z.	to present the mission statement of the center
aa.	to offer the list and contact address of the staff
bb.	to explain the innovative uses of instructional technology, academic support for undergraduate students, collaborative exercises and academic integrity, classroom design
cc.	to offer the list of council members and council research assistant
dd.	to offer the list of faculty fellows
ee.	to list of the graduate teaching fellows
ff.	to introduce the council, the aims of the council, co-chairs, the list of student members
gg.	to list the teaching programs offered by the institution
hh.	to list the programs and services currently offered for undergraduate students
ii.	to advertise workshops
jj.	to advertise the English language program
kk.	to present calendar of classes and tests
ll.	to list FAQs about English language program
mm.	to present the contact information of the English language program
nn.	to offer resources for current fellows
oo.	to present the statements of fellows
pp.	to list the campus representatives
qq.	to offer information about the center's programs and staff
rr.	to offer the list of upcoming events
ss.	to offer contact information
tt.	to offer the director's message(video)
uu.	to provide links to the writing centre, English Language Development Centre, Math

IV. Curriculum

a.	to collaborate with faculty on the design of undergraduate general education courses and graduate seminars in general education
b.	to support innovative pedagogy, including active-learning, object-based teaching, and teaching with multi-media tools, and to collaborate on the development of course materials, such as writing and research guides

Table 93 (cont'd)
Typological classification of purposes for consultations

V.	**Academic and professional development of students**

a. to assist undergraduate students who are having difficulty in a humanities or social science course through individual consultation

b. to provide information about residential college writing tutors and drop-in writing partners

c. to provide information about science and tutoring program and residential college math and science and tutoring program

d. to support graduate instructors' pedagogical, academic, and professional progress

e. to administer a variety of tests for students, to enable them to claim credit for courses in a number of disciplines, and answer questions about registration, exam types, and scheduled testing dates and locations through individual consultation

f. to provide opportunity for students to join a quarter-long study group, find tutoring and drop-in help, find academic coaching, find campus resources to help you excel, get online advice for smart studying

g. to offer links for academic advising, academic integrity, academic success: campus resources, academic support and tutoring, computing and digital media resources, how to get the most out of studying, online courses, podcasts, writing and communication resources

h. to offer a separate web-site for graduate, undergraduate students and post-docs about student life

i. to get individual help with academic writing from a writing specialist (for graduate students)

As for organizational development, development centers present rich resources on organizational structure. The purposes of organizational development include presenting key information about the center's mission, the staff, contact information, the policies, annual reports and representatives and calendar of events. Consultation initiatives of the top universities aim to foster collaborative learning as they provide platforms where students can work with study groups or can be trained on tutoring. In addition, workshops, seminars and individual consultation sessions facilitate reflection on experience and sharing knowledge among colleagues. All these consultation services provide the opportunities for self-directed learning as they support life-long learning.

Courses

Course initiatives mainly focus on faculty, instructional and organizational development. However, it can be seen that it puts more emphasis on academic and professional development. The purposes of faculty development are related to professional development course for instructors and informing candidates about the

details of the program. The purposes of instructional development include weekly

interactive meetings and small, informal meetings on various topics applied to

university teaching, training and support for non-native instructors and informing

instructors about courses and programs related to university level teaching. The

purpose of organizational development consists of annual lecture on the aims of the

education, past speakers and videos.

Table 94
Typological classification of purposes for courses

I. Faculty
   a. to offer a practice-centered flexible course which develops participants as reflective practitioners and builds on the introductory workshops and participants' previous experience
   b. to give information on application and programme content, course prerequisites, timetable, resources on the web site.

II. Instruction
   a. to provide weekly interactive meetings on focused overviews and guided application of key pedagogical research, such as prior knowledge and misconceptions, novice-expert differences, and cognitive development as applied to university teaching.
   b. to aim to prepare instructors to teach confidently and effectively, to enable them to develop in their teaching-related role
   c. to offer training and support to non-native English speakers who teach courses and undertake other instructional responsibilities.
   d. to give information on science education seminars, journal club series, Scientific Teaching Fellows Program, Summer Institutes for STEM Evaluation and Research, Instructional Materials, science teaching and learning lunches
   e. to bring students and faculty together in small, informal gatherings to explore how the humanities shape our world and our thinking.
   f. to provide links to home, about, programs.

III. Organization
   a. to offer the Annual Lecture on the aims of the education, past speakers and videos

IV. Academic and professional development of students
   a. to provide a select group of juniors and seniors with the opportunity to develop and facilitate, under close faculty supervision, a lower division seminar for their peers.
   b. to offer information about information sessions, sample classes designed and taught by students, how to apply, faculty mentors, courses, FAQs, contact
   c. to serve as a resource to both students and community partners who are interested in participating in one of the philanthropy lab courses currently offered through the honors collegium, civic engagement, or disability studies programs.
   d. to inform students about courses, application process, FAQ for community partners: how to participate, past grant awardees, FAQs, for course alumni, media, contact
   e. to offer programs for graduate student professional development in teaching, learning and scholarly communication
   f. to provide an opportunity for students to take a series of courses that focus on modern social and intellectual thought from the 17th through the 20th century
   g. to offer students across the disciplines the opportunity to expand the scope of their academic engagement through center courses.
   h. to improve the range and proficiency of undergraduate writing skills through writing courses
   i. to discuss the lecture material and important concepts, develop study strategies, and practice testing themselves on course material to prepare for their assignments and tests through weekly, voluntary facilitated study groups

Table 94 (cont'd)
Typological classification of purposes for courses

j.	to offer the fundamental ideas and intellectual activities that scholars across campus - scholars in the arts, the humanities, the social sciences and natural sciences - draw on in their work through general Education course
k.	to provide peer-assisted weekly study sessions to improve student success in traditionally difficult academic courses.
l.	to enable students to gain the ability to synthesize ideas and formulate questions regarding course content and material and, ultimately, assume responsibility for their own learning
m.	to help students make the transition from school to university, cope with academic work, enjoy extracurricular activities and enhance their career prospects through courses
n.	to offer a sequence of three classes for undergraduates who are interested in becoming K-12 science and math teachers through an education program.

As for academic and professional support for students, the purposes include offering graduate and undergraduate students with the opportunity to improve themselves through professional development courses, extra-curricular activities, voluntary facilitated groups, graduate programs and lower division seminars. Courses provided by the top universities provide self-directed learning and critically reflective practice opportunities for students, TAs and faculty as they provide platforms for goal-oriented faculty members for their short-term and pragmatic concerns about teaching and enable students to reflect critically on what they learn through the lens of their peers' perspectives in work groups or lower division seminars.

Faculty learning communities

Faculty learning communities services provided by the centers include mainly faculty, instructional and organizational support. But they tend to focus more on curriculum development. The purpose of faculty development is to provide an online platform for doctoral candidates where they can share ideas. The purposes of instructional development include resources for faculty members to work on curriculum transformation and inclusive teaching, offering an environment where peer support and collaboration with other teaching units are fostered and instructional

consultation to teaching fellows and peer teaching consultants. The purpose of

organizational development is to offer a network of communication and

collaboration among the staff units.

Table 95

Typological classification of purposes for faculty learning communities

I.   Faculty

   a.   to provide an online educational doctorate platform which is an informal, peer support network for members of college staff interested or engaged in doctoral-level study in Education.

II.   Instruction

   a.   to serve as resources for other faculty members in their respective disciplines to work on curriculum transformation and inclusive teaching

   b.   to represent a unique opportunity to learn from peers and leverage support of diverse experts in the field of teaching and learning with technology and collaborate with the center for educational innovation, academic technology support services, the university Libraries, and the Disability Resource Center to create a program that will be launched next year.

   c.   to lead Teaching Fellows and Peer Teaching Consultants

III.   Organization

   a.   to serve as a network of communication and collaboration amongst the staff units on campus who work to enrich teaching and learning for faculty and students as well as the center

IV.   Curriculum

   a.   to improve and enhance education in STEM fields on campus. The working group is both a learning community and an advisory group to senior campus leadership

   b.   to provide a year-long support for a group of faculty working together to implement a curricular change in a program or department, infusing instructional technologies into the curriculum to improve teaching and learning.

   c.   to lead the activities and setting up regular events for debate and discussion as well as sharing inspirational practice

   d.   to provide links to learn more, resources, key people, get involved, research and teaching, curriculum inspiration, conference, FAQs, challenges and solutions

   e.   to ensure that all students are able to learn through participating in research and enquiry at all levels of their programme of study.

   f.   to help contextualise the connected curriculum through curriculum studies

   g.   to understand good practice that already exists at the university and share that in order to inspire curriculum improvements.

   h.   to collaborate and make innovations to enhance the learning experience through a program that focuses on curriculum studies.

   i.   to foster internationalisation in the course content (e.g. syllabus, teaching methods, assessment, reading lists and research), different world-views on the subject, its global impact and ethical issues and case studies through curriculum studies that also serve as research projects for undergraduates

   j.   to list FAQs abut connected curriculum

The purposes of curriculum development are to implement several study groups,

activities and programs focusing on curriculum improvement, offering examples of

good practices as a resource for inspiration, fostering internationalization in the

course content and offering detailed information about each on the web site. The

purposes show that curriculum changes can occur at all levels, either at broader level through programs or just adjusting the course content.

Mentoring

Mentoring initiatives offered by the centers focus only on faculty development. The purposes include helping post-docs and graduate instructors develop their mentoring skills, equipping teaching mentors with the skills, resources and knowledge about mentoring through several ways such as online handouts, mentoring programs, informative sessions and mentoring series. In addition, purposes of mentoring services include peer-mentoring and student-mentoring opportunity for TAs, opportunities for finding a mentor, building strong mentoring relationships, benefits of having a mentor, tips for mentees and providing early career faculty access to experienced peer consultants for guidance and support in their important roles as teachers.

Table 96
Typological classification of purposes for mentoring

I.	**Faculty**	
	a.	to help graduate instructors and post-docs develop skills in mentoring undergraduate researchers.
	b.	to provide the faculty newsletter article link about the mentoring program
	c.	to equip teaching mentors with the skills, resources, and content knowledge necessary to be most effective.
	d.	to provide links for teaching mentors, mentoring fellows, mentor training, support and resources
	e.	to inform faculty about what pre-major advising is, advising partnerships, advising in action, advisor spotlight and application process.
	f.	to serve as resources of mentoring such as general mentoring resources, mentoring TAs and mentors in teaching program
	g.	to provide links for new supervisors, experienced supervisors, co-supervision, improving their supervisory practice, supervisory styles, graduate admissions, being an examiner, student-supervisor relationships, giving and receiving feedback, understanding reasons for delay, monitoring student progress, avoiding potential difficulties, ideas and tools and insights from research and literature
	h.	to help faculty members to learn transfer and confirmation status, preparing students for examination, selecting examiners, the viva, the outcomes
	i.	to coordinate and support a range of mentoring schemes within the collegiate university through the learning Institute.
	j.	to introduce mentoring programs, Postgraduate Diploma in Teaching and Learning in Higher Education program

Table 96 (cont'd)
Typological classification of purposes for mentoring

k.	to provide information about mentoring series, workshops for faculty mentors, mentees, and mentoring program designers
l.	to provide opportunities for finding a mentor, building strong mentoring relationships, benefits of having a mentor, tips for mentees
m.	to provide materials designed to help faculty to be an effective mentor and to provide contact information for group consultation
n.	to provide early career faculty access to experienced peer consultants for guidance and support in their important roles as teachers
o.	to provide assistance to graduate instructors who wish to be mentors
p.	to serve as resources for teaching and mentoring resources under three headings: teaching strategies, the center network, education research and literature

Mentoring initiatives of the top-universities aim to foster self-directed learning as they provide platforms for activity-oriented learners to get a certificate or a postgraduate diploma through programs or improve their mentoring skills through mentoring programs. They also foster critically reflective practice as they enable faculty to share experiences through group consultations and improve their mentoring skills with online resources on fundamentals of being an effective mentor, which enables them to reflect through the lens of theoretical, philosophical, and research literature.

Non-degree programs

Non-degree program initiatives mainly focus on academic and professional support for students, but they put more emphasis on instructional development. The purposes of academic and professional support for students include subject-specific training programs for students, teaching support for TAs through certificate programs and list of useful resources.

Table 97
Typological classification of purposes for non-degree programs

I.	**Instruction**
a.	to enhance the pedagogical skills and extend research training for recent graduates of PhD programs in the Humanities or Social Sciences at the university through the divisional teaching fellows program
b.	to list certificate information and requirements

Table 97 (cont'd)

Typological classification of purposes for non-degree programs

	c.	to provide graduate students and postdoctoral researchers opportunities to develop as self-reflective teachers through the Teaching Transcript Program
	d.	to offer non-degree programs advancing research-based education.
	e.	to provide Supporting Learning and Teaching Pathway and postgraduate Certificate in university Learning and Teaching programs
II.	**Academic and professional development of students**	
	a.	to inform graduate students about Graduate Teaching Assistants Program (engineering specific training for research students)
	b.	to help assistants improve their skills and knowledge in the areas of practical and small-group teaching, in which aspects of preparation, student learning and motivation, and assessment and feedback are considered
	c.	to have access to teaching specialists to help support their teaching
	d.	to get awareness of resources

As for instructional support, the purposes include teaching fellows program for recent graduates of PhD programs, details about the programs, teaching transcript program for graduate students and post-doctoral researchers, certificate programs on research-based education and post-graduate certificate in university teaching programs. Thus, it can be stated that non-degree program initiatives of the top universities provide reflective practice opportunity through various certificate and teaching fellows programs for different groups of students so that they can *reflect on* their teaching practices and grow as future instructors in higher education.

Publications

Publication services of the top universities mainly focus on organizational development. However, more emphasis is put on faculty development. The purposes of organizational development include all the publications created by the centers; presented papers and archives, online catalogues, annual reports, online blogs, published news and e-mail newsletter and reproductions

Table 98

Typological classification of purposes for publications

I. Faculty

a. to give information about student motivation to study, clarifying the expectations, thinking about academic and other careers, identifying and developing skills, varied conceptions of research, defining the research topic, doing research/inquiry, integrity and ethical practice, reading and writing, presenting seminars at conferences, publishing during doctorate, writing your thesis (for post-graduate researchers)

b. to inform about infrastructure and resources as well as intellectual climate

c. to list the purpose of the doctorate, trends in doctoral education and research into doctoral education

d. to present various resources provided by the Learning Institute for general use, including self-directed learning resources and initiatives that support staff learning, many of which have been developed based on the experience shared by colleagues in the university.

e. to enable advanced research on gender, culture and development. The Equality Challenge Unit promotes equality and diversity in higher education and has materials on gender on its website and Three online courses: unconscious bias, equality and diversity, undergraduate admissions

f. to provide information on clinical trial investigator series, principal investigator development series, faculty mentoring, summer writing group program, grant writing

g. to serve as a resource for the growing number of students, faculty, and researchers in the community both interested in and currently contributing to educational research

h. to connect initiatives to each other and to inform the community about relevant advances in the field.

i. to list the articles and conference papers, working papers and an educational research agenda for digital learning

j. to inform the faculty about the latest curriculum and pedagogy development initiatives

k. to offer library database for research

l. to compile a list of resources across campus that offer research-related guidance, services, and opportunities for faculty.

m. to provide a separate web site specific for supervisors and doctoral students, as well as information for colleagues who work alongside doctoral candidates, who mentor them or help to support their research.

n. to provide one-on-one consultations to assist and postdocs with their specific research-related needs.

o. to assist faculty members on doing research through the research staff Society, research staff working group, staff gateway, support for researchers, the careers Service and vitae

p. to list grants, publications and presentations for all diversity projects

II. Organization

a. to offer the online blog with the aim of sharing educational experiences of faculty member and center staff with colleagues, peers and students

b. to present information about the forum post proposals (format, topic etc.), and a link for application and latest posts

c. to publish a collection of short papers on pertinent teaching and learning topics with practical suggestions and resources.

d. to present published News and email newsletter

e. to offer links to the center's publications

f. to offer links to the published annual reports

g. to offer links to useful resources to help faculty use technology effectively in teaching

h. to offer the center's blog so that the users can keep up to date on latest instructional technology

i. to present newsletter, Provost, Vice Provost Views and Perspectives in a publication

j. to offer reproductions of woodblock prints from the library's collection decorate the spaces in the center

k. to offer link to the online catalog

l. to offer the list of funded projects since 2000

m. to present the report of the Ad Hoc Committee on Learning Space Improvement

n. to offer Publications by years

o. to offer selected presentations of team members, which have been produced for conferences or central events.

As for faculty development, the purposes include providing information about research procedures and intellectual climate of the university for researchers, offering library databases, offering one-on-one consultation on research and publication, connecting initiatives to each other and to inform the community about relevant advances in the field and presenting articles, offering self-study resources on research and publication listing and conference papers regarding teaching and learning. Publication services of the top universities offer a platform where self-directed learning and online learning are facilitated. They provide self-study resources for goal oriented learners who wish to improve researching skills for future publications and find useful resources for their studies. In addition, they list the centers' publications for all users.

Self-study

Self-study initiatives of the top universities mainly focus on faculty, curriculum and academic and professional support for students. However, they tend to put more emphasis on instructional development. Faculty development purposes include encouraging faculty to collaborate with community partners and sharing tips on managing a meeting or chairing a committee. Curriculum development purposes are related to informing audiences about the different principles and theories of curriculum design. The purposes of academic and professional development of students include academic writing support through several self-study resources and different units such as writing centers, professional support for the future careers of graduate students through teaching portfolio preparation and getting ready for academic job interviews.

Table 99

Typological classification of purposes for self-study

I.   Faculty

   a.   to encourage faculty and students to collaborate with community partners on research projects

   b.   to share tips on managing a meeting or chairing a committee

II.   Instruction

   Teaching methods and techniques

   a.   to show the basics of active learning and examples of active-learning initiatives within and beyond the university and additional resources on teaching with active learning

   b.   to give additional links to active learning pedagogies, activity-based learning, ABL Connect, Materials and Course Examples, Summer Institute on Undergraduate Education in Science and Engineering

   c.   to provide handouts for prior knowledge, metacognition, critical thinking, Longhorn learning model

   d.   to inform about the function and components of a syllabus, examples of syllabus and tipsheets

   e.   to show the links of some articles about teaching philosophies and statements, teaching portfolios and course portfolios

   f.   to provide links to more general resources addressing effective teaching principles and techniques (general resources, engaged learning, teaching challenges, teaching context and their sub-categories.)

   g.   to demonstrate blended learning report (a set of four individual feedback reports to provide course instructors and teaching staff with information to inform future iterations of hybrid courses.)

   h.   to provide a detailed overview of classroom dynamics and diversity, a book recommendation, tipsheets

   i.   to provide information about how students learn through a detailed overview of learning theories

   j.   to give discussion tips, offering books about it and tipsheets

   k.   to list a selection of practical, online references that the center recommends for the teacher interested in research-based pedagogy.

   l.   to list research on learning (Student Success in College and Sleep and Learning)

   m.   to integrate tips, tutorials, and referral information to assist faculty in their role as educators through the Teacher's toolkit

   n.   to inform faculty about advanced discussion leading, advanced section planning, diversity in the classroom, finding advanced teaching opportunities, preparing a lecture, public speaking for teachers, lecturing without fear, the mechanics of speaking, teaching controversial topics, teaching students to write good papers, teaching students with different learning styles and levels of preparation

   o.   to list the basics of good classroom management, logistics, and built-in daily reflection on the teaching process.

   p.   to list self-study resources under the following categories: understanding diverse students' perspectives, before teaching, during classes.

   q.   to offer guidelines and Information about how to ask good questions during the class

   r.   to offer Guidelines and Information about the characteristics of effective listening

   s.   to provide information about planning small groups

   t.   to list suggestions for using small groups in the classroom

   u.   to list a few suggestions on how to initiate a discussion or approach a discussion topic.

   v.   to offer a handout intended for CAs/TAs leading a discussion section that is part of a class taught by another instructor. It focuses on discussion-based teaching approaches.

   w.   to offer a handout on leading effective discussion

   x.   to give information about discussion in the class

   y.   to give information about lecturing

   z.   to give information about diversity and inclusion

   aa.   to offer a direct link to the key topics on teaching

   bb.   to give reasonable suggestions on how student learning in practice can be promoted or contain basics thematic priorities.

   cc.   to offer some resources to help instructors quickly and easily integrate writing into their regular teaching practice

   dd.   to bring together resources and ideas to help teachers -- both faculty and graduate students -- and undergraduate learners make the most of the large class experience and resources as tips and guides for large classes.

   ee.   Technological support

   ff.   to provide links to e-learning tools: Moodle, lecturecast, electronic voting systems, turnitin, myportfolio, web-conferencing, open educational resources

Table 99 (cont'd)
Typological classification of purposes for self-study

gg.	to explore how to create online opportunities to keep students engaged and learning together through links to the big picture, facilitating engagement, evaluation and research, assessment best practices, learning module design, Longhorn Learning Model
hh.	to provide useful links for integrating technology into classroom such as: getting started, choosing your technology, center IT Support, Faculty Examples, Flipping Your Class, Distance Learning Programs
ii.	to offer seminar video links and TA seminar video links and TA Training Video Links
jj.	to give handouts on flipping the classroom, employing inclusive teaching strategies, promoting student engagement through active learning, leading dynamic discussions, large lecture instruction, teaching with technology, service learning, office hours

Course design

kk.	to provide useful links for getting prepared to teaching such as course design and planning, syllabus design, first days of class, strategies for effective lesson planning, creating inclusive classrooms, choosing your technology, GSI guidebook
ll.	to offer helpful information about course design, assignment design and syllabus design, course tools/resources
mm.	to offer separate links to designing your course and syllabus, teaching the first day of class, teaching different types of classes, cultivating faculty and TA working relationships, assessing student learning
nn.	to help instructors handle the large class experience through resources as tips and guides
oo.	to offer links for course planning, course materials, teamwork, active learning, flipping the classroom, assessment

Assessment and evaluation

pp.	to provide information about assessing teaching, peer review of teaching, developing teaching philosophy, creating teaching portfolio
qq.	to share tips for assessing the course and links for more information
rr.	to provide information about assessment and evaluation activities ranging from macro-level data about student experiences to departmental materials used in select, individual courses such as curriculum design, collecting assessment data, planning for curricular assessment, Assessment Services, Recent Assessment and Evaluation Publications, Evaluating and Online Learning Tool

Orientation

ss.	to provide useful information for instructors such as academic calendaring, course materials and activities: course syllabus requirements, guidelines for holding classes and related educational activities off campus, mental health syllabus statement and safety, health and wellness.
tt.	to offer online resources for getting started, authorship, licensing and revenue sharing, using copyright material, resources, FAQ
uu.	to offer guidelines and Information about the first day of class
vv.	to inform about basic Guidelines of dealing with disabled students
ww.	to provide links to course logistics, instructional technology, library, office for academic integrity, office for the prevention of harassment and discrimination, office for students with disabilities (OSD), student information, student in distress, syllabus preparation, writing center

III. **Curriculum**

a.	to list the principles of curriculum design

IV. **Academic and professional development of students**

a.	to offer guidelines for principles of citing sources, understanding and avoiding plagiarism, citing books, citing articles, citing internet sources, citing miscellaneous sources
b.	to offer information about what good writers know, writing handouts, model writers from the disciplines, student publications, the WR requirement, junior and senior essays, creative writing, journalism initiative, advice for ESL writers
c.	to share tips for creating a teaching portfolio and getting ready for academic job interviews
d.	to inform about Individual Writing Consultations, Peer-Review Groups, Writing Bootcams and Study Halls, Writing Workshops, Seminars and Panels, Writing through Graduate School, Graduate Writing Advisors Program

As for instructional development, purposes include supporting all faculty members

and instructors on teaching methods and techniques, technological support, course

design, assessment and orientation. Self-study resources provided by the top

universities support andragogy as an adult learning theory in that they offer the

learning climate where learners can feel at ease. Any instructor, even the ones who

do not work for these specific institutions can benefit from these various resources

easily. In addition, they provide self-directed learning, critically reflective practice

and online learning as they provide platform for access to information, enhancing

computer literacy skills and reflection of one's own assumptions through the lens of

theoretical, philosophical, and research literature.

Tutoring

Tutoring initiatives of top universities mainly focus on faculty, but they put more

emphasis on academic and professional development for students. The purposes of

faculty development include informing mentors about personal tutoring and offering

services helping faculty gain mentoring skills, especially mentoring graduate

students.

Table 100
Typological classification of purposes for tutoring

I.	**Faculty**
a.	to present information about personal tutoring
b.	to offer services that enable faculty to gain mentoring skills, especially mentoring graduate students
II.	**Academic and professional development of students**
a.	to offer information about residential college writing tutors, drop-in writing partners
b.	to support student learning at any stage in the writing process, from planning an outline to polishing a final draft through the Writing Center which offers tutoring and individual consultation
c.	to help students communicate more effectively for their academic needs; to confidently participate in classes, tutorials and campus life; and, to equip students with strategies and tools to participate actively in the academic community through English Language Development Centre (ELDC)
d.	to provide free seminars, workshops, virtual tutoring, individual appointments, and small-group consultations to improve students' proficiency in various subjects of mathematics and statistics (The Math and Statistics Learning Centre (MSLC))

As for academic and professional development for students, the purposes include

offering residential college writing tutors and drop-in writing partners, writing

centers offering tutoring and individual consultation on writing, initiating English Language Development Centre to help students communicate for their academic needs and providing virtual tutoring to improve students' proficiency in various subjects of mathematics and statistics by. Thus, the purposes of tutoring initiatives implemented by the top universities include offering students from all levels and grades tutoring services related to subject matter or writing through several centers and assisting faculty to improve their mentoring skills.

Workshops

Workshops conducted by the top centers mainly focus on faculty, curricular, organizational and academic and professional development, but they tend to put more emphasis on instructional development. The purposes of faculty development include professional and career development workshops for all researchers, professional development workshops for TAs, strategy and leadership seminar series for early career faculty development, leadership skills workshops for faculty, workshop series on MOOC-Centered learning community, general workshops related to teaching for faculty and students, customized leadership presentations for faculty groups, consulting and advising services, faculty retreat and workshop facilitation. The purposes of organizational development include programmes for academic leadership development, induction, administrative and personal development. Workshops are also offered for senior strategic roles, research supervision, clerical, secretarial, administrative, technical or ancillary roles.

The purposes of curriculum development include collaborating regularly with

departments and programs on campus and beyond to create research-driven evidence

aimed at improving STEM education at the university.

Table 101
Typological classification of purposes for workshops

I.   Faculty

a.   to support researchers across the university for their professional and career development through workshops

b.   to offer a day-long event with seminars and a panel discussion that aim to better prepare TA's for competitive job market.

c.   to offer strategy and leadership seminar series for early career faculty development and core skills program for faculty leaderships

d.   to offer workshop series on MOOC-Centered Learning Community, mentored discussions of teaching, position opening: postdoctoral fellow.

e.   to present conferences, publication and workshops on higher education teaching

f.   to offer up to 200 seminars annually that provide students and faculty with small group settings to engage in meaningful discussions on a range of topics.

g.   to provide a variety of consultation services for faculty leaders and their faculty units. These services include customized leadership presentations for faculty groups, consulting and advising services, faculty retreat and workshop facilitation

h.   to offer workshops, education day, perspectives in education, educational doctorate network

II.   Instruction

Teaching/learning

a.   to offer links to new faculty workshop, teaching fellowship, workshops and sessions, learning, teaching and assessment forum

b.   to provide access to educational research that can support individual and institutional efforts to enhance residential student learning.

c.   to meet the needs of specific disciplines and to fit a variety of time frames. A manual containing readings, handouts, and exercises accompanies each workshop.

d.   to conduct workshops on meeting the lecture challenge, presentation skills for academics, how to use team work in the classroom, assessing student learning and educational practice, leading recitations, mentoring graduate students

e.   to offer seminar series, workshops, and informal discussions aimed at disseminating knowledge about effective teaching methods and new instructional technologies

f.   to offer an annual workshop on transformative learning for staff and students

g.   to improve teaching and learning by discussing and developing new technologies, and designing and conducting real-world experiments.

h.   to extend MOOCs, to improve student engagement, to teach research skills, to accelerate learning of interdisciplinary subjects, and to encourage collaborative research.

i.   to offer the format information and current members of the workgroup and calendar and private wiki

j.   to explore how teaching technologies can be used to help students achieve learning goals.

k.   to help instructors think about their classrooms as environments which can be unknowingly affected by bias, both from instructors and from students.

l.   to help instructors reflect on how they approach their roles as instructor.

m.   to discuss three themes--discussion, lecturing, and assessment.

n.   to provide faculty with the opportunity to join one of the five Summer Institutes on Undergraduate STEM Education being held across the country.

o.   to invite faculty with twenty-four Midwest liberal arts colleges into an on-going conversation on interdisciplinary scholarly debates and excite intense intellectual consideration of new scholarship by both university faculty presenters and liberal arts college faculty participants.

p.   to offer links to current conference, travel and accommodation, upcoming institutes, special programs fair, preparing future faculty, past institutes, about , contact information

q.   to offer faculty, particularly those who teach large classes, an opportunity to come together and discuss challenges they face and changes they would like to implement in their teaching through collegium workshop series, to actively engage participants in open conversations about teaching and learning and explore active learning strategies, teaching with technology, assessment, and diversity as they relate to large class instruction.

Table 101 (cont'd)
Typological classification of purposes for workshops

r.	to offer workshops, seminars, and conversations for instructors on a variety of teaching and learning topics and to meet the needs of both seasoned professionals and newcomers through the discussion of shared experiences and knowledge	
s.	to enhance instructors' teaching and offer a robust and integrated platform of resources and expertise that extends from pedagogy and learning to educational technologies and video production.	
t.	to offer a setting for faculty to come together for two days of course-building and guided discussions led by experts from the center and the Council on Science and Technology through The Course Design Institute workshop series	
u.	to bring together faculty from across divisions and departments and provide opportunities for the sharing of knowledge and ideas among peers for Teaching Conversations in the Residential Colleges	
v.	to foster discussions about teaching and learning such as the importance of student diversity, faculty diversity, and equitable teaching practices within the community	
w.	to serve as basic introductions to important aspects of teaching and learning through workshops designed for all faculty members.	
x.	to announce 'practical guide' series that consists of short, pragmatic workshops covering key practical aspects of teaching and learning	
y.	to provide assisting with PhD supervision, communicating knowledge, interactive teaching, laboratory teaching, lecturing, making the most of one-off teaching, setting and marking assessments	
z.	to offer a workshop strand catered to the faculty who teach undergraduate medical students.	
aa.	to introduce teaching and learning in the Faculty of Medicine by focusing on teaching in clinical settings, introduction to problem-based learning in the faculty of medicine, introduction to feedback and formative assessment in the faculty of medicine, a practical guide to small group teaching in the faculty of medicine, focus on managing challenging groups in problem based learning, medicine by request workshops	
bb.	to offer a by-request workshop facility for groups of people at the request of a particular department, faculty, hospital, trust, division or campus.	
cc.	to offer links to workshop by request form	
dd.	to offer workshop calendar	
ee.	to improve on the past, address current issues and look ahead to new possibilities. through workshops and conferences	
ff.	to demonstrate the videos of previous workshops and conferences	
gg.	to foster collaborative learning, learning in STEM, learning and diversity, and conceptual learning, among others	
hh.	to assist faculty on classroom technologies, MOOCs, teaching ideas for inclement weather	
ii.	to present a detailed description of exploratory seminars	
jj.	to present a detailed description of assessment seminars for faculty	

Orientation

kk.	to offer workshop on teaching in the college for both new TAs and new faculty and to assist course assistants and faculty members on various aspects of teaching	
ll.	to offer information about the upcoming and previous workshops for teaching assistants	
mm.	to offer courses teaching and learning in Switzerland and abroad through workshops and individual consultations on request	
nn.	to offer Annual TA Orientation and to aid TA s in their teaching.	

II. Organization

a.	to describe the support offered to individuals taking on the most senior strategic roles, the induction programme for departmental Heads and Faculty Board Chairs, and the Academic Leadership Development Programme for those who wish to explore academic leadership.	
b.	to offer an integrated suite of programmes to support those in the university who have responsibility for managing staff or projects as part of their role.	
c.	to offer information about managing induction, personal development review, for women	
d.	to offer workshops about 'Research Supervision' aiming at new supervisors and the more experienced staff from whom they may seek guidance.	
e.	to offer a wide range of workshops and resources for support staff, whether they are in a clerical, secretarial, administrative, technical or ancillary role.	
f.	to host the Ad Feminam mentoring scheme, intended to encourage women to explore their leadership potential within academic life, or within an administrative career, for example, as leaders of departments and divisions or taking leading roles in university governance.	

Table 101 (cont'd)
Typological classification of purposes for workshops

g.	to offer different types of workshops: Assertiveness: managing relationships in the workplace, time management for support staff and managers, understanding and managing stress: for individuals, managing upwards, giving and receiving feedback, emotions at work, mindfulness for health and well-being
h.	to offer public seminar programme on higher education each term
i.	to examine teaching and learning in greater depth and is designed for those with greater teaching experience and wider College responsibilities (a series of workshops)
j.	to offer workshops on educational design and assessment management, external examining
k.	to offer two workshops and a series of drop-in sessions aimed at supporting faculties' journey towards Higher Education Academy recognition
l.	to meet the needs of the significant number of college staff whose job involves supporting learners but who are not part of the full-time academic staff.

III. Curriculum

a.	to collaborate regularly with departments and programs on campus and beyond to create research-driven evidence aimed at improving STEM education at the university
b.	to offer a complete list of grants, publications, and presentations related to STEM Education research.

IV. Academic and professional development of students

a.	to offer a series of hands-on, active, and process-focused workshops in which students learn and apply strategies designed specifically the university context
b.	to emphasize advanced and innovative techniques for purposeful and efficient learning.
c.	to explore presentation skills through workshops
d.	to prepare graduate students for a career in academe and present videos of previous sessions
e.	to build upon the training received during teaching by providing a venue for discussing and addressing the prospects and challenges of the first teaching assignment.
f.	to prepare graduate students for future teaching career through the preparing future faculty series
g.	to discuss examples of collaborative exercises that were designed to meet specific learning goals
h.	to offer a year-long teaching seminar for graduate students
i.	to provide a unique environment, particularly important in a research university, for participants to focus intensively on the goals and practices of teaching as well as the challenges encountered by their undergraduate students as they confront the assumptions and conventions of disciplines across the curriculum.

As for instructional development, the purposes of workshops include workshops, forums and seminars on a wide range of teaching and learning related areas, ranging from instructional technology to educational research for faculty, instructors and departments on a regular basis or depending on their needs. In addition, orientation workshops for TAs are also held to assist them in higher education teaching. As for the purposes of academic and professional development for students they mainly focus on instructional support for graduate students who wish to be instructors in the future, professional development seminars and workshops, collaborative exercises and academic support.

As Robertson (2010) states, workshops are among the oldest services delivered by the centers and their purposes are rich in depth and content. Workshops provided by the top universities include collaborative learning, critically reflective practice and self-directed learning opportunities as they provide platforms where collaboration with peers and colleagues, getting long term or short term support according to specific needs and critical reflection on instructional, academic and professional skills are facilitated.

Awards

Awards given by the centers focus on instructional development. The purposes of instructional development include valuing good teaching at the university, recognizing excellence in teaching among faculty, instructors, mentors and TAs in institute-wide and discipline-specific, honoring original and specific innovations to improve student learning and giving a prize as well, listing the eligibility, past winners and sometimes offering funds afterwards.

Table 102
Typological classification of purposes for awards

I. Instruction

a. to value good teaching and to list several teaching prizes and awards specific to different schools, colleges, and programs and the central administrative awards.

b. to recognize excellence in teaching among faculty, instructors, mentors, and teaching assistants in institute-wide and discipline-specific

c. to honor faculty members who are exemplary in supporting the development of their graduate students as teachers, scholars, and professionals

d. to offer Provost's Teaching Awards and list the previous winners of Provost's Teaching Awards

e. to honor original, specific innovations to improve student learning, not instructor's overall teaching excellence by a prize sponsored by the office of the Provost, the center, and the university library.

f. to inform faculty about goals, award, eligibility, nominations, selection criteria, selection process and timing.

g. to promote creative thinking among students and faculty, and to develop programs that will intensify student learning experiences in and beyond the classroom through several grants

h. to recognize faculty for extraordinary contributions to undergraduate education, including faculty from the graduate and professional schools through the university fellows program.

i. to offer videos of award winning teachers

Table 102 (cont'd)
Typological classification of purposes for awards

j.	to provide grants to fund the retreats and to implement plans to improve teaching and learning that develop from such events	

Awards of the top universities aim to encourage innovation and progress in teaching and learning activities through awards, prizes and funds for faculty, instructors, mentors and TAs. They offer self-directed learning as they may motivate learning oriented learners to develop themselves in their profession and become eligible for winning an award.

Community service

Community service initiatives of the centers mainly focus on instructional development, but they tend to put more emphasis on academic and professional development for students. The purposes of instructional development include providing information to faculty members who are interested in community learning so that they can adjust their syllabus accordingly.

Table 103
Typological classification of purposes for community service

I.	**Instruction**	
	a.	to provide information to faculty members who are interested in community learning
II.	**Academic and professional support for students**	
	a.	to provide students with a core analytical and theoretical framework for community building, governance, and the use of civic resources through a civic engagement minor program.
	b.	to provide in service learning courses through which students learn through active participation in thoughtfully organized work within the community that is connected to academic, credit-bearing courses.
	c.	to offer List of Spring 2016 and Fall 2017 community service courses, course descriptions, videos and service learning in the community
	d.	to promote literacy among preschool students with the contributions of undergraduates
	e.	to provide students with the opportunity to serve the community for a year
	f.	to provide equal access to justice for those who cannot afford an attorney. Students are trained and supervised by attorneys.
	g.	to offer FAQs about the internship courses
	h.	to list student success stories
	i.	to support the work of a select group of students who will conduct research on civic engagement during their senior year through a scholars program

Table 103 (cont'd)
Typological classification of purposes for community service

j.	to provide students with a core analytical and theoretical framework for community building, governance, and the use of civic resources through civic engagement program courses	
k.	to offer disability studies as a community service course	

As for academic and professional support for students, the purposes include encouraging students to contribute to the community through credit-bearing community service courses, scholar programs, internships and civic engagement minor programs. Community service initiatives of the top universities provide opportunities for undergraduate students to serve to community in various ways through programs, courses or internships and foster social advocacy as well as information for faculty members who wish to incorporate community service into their courses. They foster transformative learning as they enable students to experience the four processes of learning and transform their habits of mind through a critical reflective of their generalized bias in a different way thanks to these programs and courses.

Credit workshops

Credit workshops focus on academic and professional development of students. The purposes include preparing graduate students for their future careers and benefitting all students who wish to develop their preparation and credentials for later teaching responsibilities in their careers.

Table 104
Typological classification of purposes for credit workshops

I.	**Academic and professional development of students**	
a.	to prepare graduate students for their future careers through emphasis on development of skills that are not limited to specific disciplinary programs.	
b.	to benefit any students who seek to develop their preparation and credentials for later teaching responsibilities in their careers.	

Credit workshop initiatives focus on supporting students' professional development through credit-bearing workshops. They foster learner autonomy through peer-collaboration.

Evaluation of teaching

Teaching evaluation practices of the top universities focus on instructional development. The purposes include offering several methods and practical guides for instructors and faculty to reflect on their teaching practices through student ratings, feedback sheets or letters, sample student works, feedback from advisees, video-recording sessions and private consultation sessions and self-study resources.

Table 105
Typological classification of purposes for evaluation of teaching

I. Instruction

a. to provide student ratings and use these rating results for improvement or decision-making

b. to present examples of student work that show what students accomplished in the course

c. to get student letters, solicited from the whole class by the department

d. to list online surveys designed by individual instructors, departments or units

e. to get feedback from advisees

f. to encourage faculty to ask students for feedback and to assist faculty to design the feedback form

g. to provide "mud card" feedback sheet and "End of Semester Evaluation Form" for all departments.

h. to provide the opportunity to have one or more of their classes video-recorded and have the recording reviewed with a professional teaching consultant.

i. to demonstrate link to the ways of documenting and improving teaching effectiveness under teaching resources category, to give some information about why document and improve teaching effectiveness, sources and methods for documenting teaching effectiveness

j. to outline the various sources of information (i.e., students, colleagues, alumni, GSI's) and methods employed to gather evidence of one's teaching effectiveness (i.e., student course evaluations, peer observation of classroom teaching, alumni surveys, GSI letter)

k. to offer mid-term small group feedback session, midterm online feedback survey, Video recording and consultation

l. to work with faculty to design and deploy early feedback surveys for courses and sections and to provide summarized results and consult with faculty after surveys are complete.

The evaluation of teaching services of the top universities put emphasis on improving the quality of university level teaching through compulsory, regular or voluntary methods of evaluation for instructors and TAs. They provide reflective

thinking opportunities for the audiences as "the reflective practicum" is enabled for them with the assistance of professionals as coaches. In addition, they can reflect "critically" through the lens of learners' eyes, the lens of colleagues' perceptions, and the lens of theoretical, philosophical, and research literature with all these evaluation services.

Faculty fellows

Faculty fellows initiatives mainly focus on academic and professional support for students, but they tend to put more emphasis on instructional development. The purposes of academic and professional support include teaching fellows program in which they can advance their teaching and leadership skills.

Table 106
Typological classification of purposes for faculty fellows

I.	**Instruction**
	a. to promote a personalized experience for fellows by association with faculty and staff on an informal basis outside the classroom and office
	b. to provide information about the provost's teaching fellows, meet the fellows, faculty innovation showcase, first Friday think tank, teaching tips
	c. to pursue research and collaborate with colleagues
	d. to design program where grad students can sort the activities by both the Developmental Stage of their teaching as well as the area of Focus that they wish to develop.
II.	**Academic and Professional Support for Students**
	a. to provide an opportunity for graduate students to advance their teaching and leadership skills while contributing to the pedagogical development of their peers through teaching fellow programs

The purposes of instructional development of the top universities include offering research and collaboration opportunities with the colleagues for fellows and graduate fellows and programs designed both for instructional and career development. They provide platforms where experience sharing and collaborative research are fostered for faculty fellows. All these services facilitate self-directed learning and

collaborative learning as they enable audiences to gather around a common point of interest and learn from one another's experiences.

Grants

Grants offered by the top universities mainly focus on curriculum, but they tend to put more emphasis on instructional development. The purposes of curriculum include encouraging projects and innovations that respond to changes in education such as projects involving service learning and civic engagement, diversity, study groups, active learning and engagement, speaking or writing skills or classroom assessment.

Table 107
Typological classification of purposes for grants

I.	Instruction
a.	to provide funds (up to $3,000) for small-scale projects to improve existing courses, develop new courses, evaluate instruction, and assess curricular needs
b.	to support larger innovative projects that will directly and significantly affect teaching and learning, such as developing materials for new and existing courses and developing new modes of instruction.
c.	to provide non-ladder faculty with an exceptional opportunity to work in teams to build teaching and learning tools, templates, and resources for both their individual courses and the entire campus community by offering them grants.
d.	to provide links to past teaching grants recipients and sample grant proposal and learn about Teaching grants and Grant Expense Guidelines
e.	to reflect the emphasis that the university puts on effective teaching, these teaching awards are given out each year on campus at the university-wide and the School level and by student groups.
f.	to seek proposals for the grants for pedagogical advancement from all faculty, ladder and non-ladder, who would like to design and develop new digital course materials or experiment with new teaching models and technologies.
g.	to provide information about current grants and guidelines for how to apply it
h.	to support innovative undergraduate teaching and learning at the course or curricular level.
i.	to provide substantial financial and staff support to design, deliver, and measure the impact of novel approaches by faculty, instructors, and academic leaders.
j.	to have transformational enhancement of the curricula and pedagogy through the leveraging of existing or emerging digital technologies.
k.	to advise faculty on the development of proposals for support of projects that advance innovative teaching and learning in classroom and beyond and resources
l.	to get in depth understanding of assessment practices in higher education, knowledge and strategies to articulate learning outcomes, application of use and user-driven principles to design and implement program level assessment, ability to analyze and interpret qualitative and/or quantitative data, ability to report assessment data in digestible ways
m.	to improve undergraduate student outcomes in STEM.
n.	to build STEM education expertise, supporting STEM faculty in developing their teaching practice, engaging STEM faculty in habits of reflection, nurturing a tradition of continued learning about teaching practice

Table 107 (cont'd)

Typological classification of purposes for grants

o.	to honor a professor or associate professor with an appointment in one of the donor-identified fields—classics, comparative literature, English, European languages, history, or philosophy—who has a distinguished record of teaching.
p.	to house and incubate faculty-driven projects related to teaching and learning.
q.	to present information about project development, design research methodology, partnerships and grant opportunities

I. Curriculum

a.	to encourage projects that respond to changes in education: for instance, projects that involve service learning and civic engagement, that enhance diversity, that encourage study groups, that promote active learning and engagement, that focus on speaking or writing skills, or that seek to improve classroom assessment.

As for instructional development, the purposes of grants are to enhance teaching quality in higher education through grants for teaching and learning, assessment, technology and program level changes and motivate ladder and non-ladder faculty to initiate novel approaches. The grants offered by the top universities also create platforms where individual or project-level innovations in higher level teaching and learning are encouraged.

Instructional technology

Instructional technology initiatives mainly focus on organizational and academic and professional development of students, but they tend to put more emphasis on instructional development. The purposes of organizational development include offering an online, interactive wiki "encyclopedia" to organize effective learning in the university context, creating online courses for public use and designing technology halls or classrooms for public use. The web sites of the centers are platforms where marketing and advertisement regarding the instructional technology practices of the universities are presented and promoted.

As for academic and professional development, the purposes include offering online non-degree programs, MOOCs, seminars, lifelong learning, videos for students on different areas of professional development and online courses.

Table 108
Typological classification of purposes for instructional technology

I. Instruction

Teaching/learning

a. to select high tech and low tech options for the flipped classroom
b. to incorporate new approaches to teaching in a technology-rich environment
c. to create an inclusive learning climate and improve student success with technology
d. to use emerging technologies such as Canvas, Piazza, M+Box, Google suite, among others
e. to support academic unit efforts to provide students with expanded access to degree and certificate programs through online and blended options
f. to leverage technology to deal with instructional challenges such as encouraging student participation in large courses and to provide easy access to multimedia
g. to ensure that all students are able to access and use IT successfully
h. to collaborate with the Academic Technology Group to foster the use of technology for teaching undergraduate courses
i. to raise awareness of open educational resources on campus
j. to offer Equipment Reservation and Checkout, Reveal, Clickers, Panopto Lecture Capture/Podcasting, Turnitin, SensusAccess Web Accessibility Converter, Timeline Creator
k. to aggregates resources to support online and blended learning
l. to empower students with more ownership in their learning with instructors acting as facilitators in guiding student activities through interactive learning.
m. to facilitate and promote effective use of multimedia and computer-based resources in the curricula
n. to present a moderated email forum for exchanging information, advice, tips, and general talk concerning teaching.
o. to support faculty members in all aspects of the creation of both campus-based online course sites and open courses (MOOCs) that intensify and broaden student learning.
p. to foster the purposeful application of new technologies to enhance teaching and learning through innovative and effective use of educational technology through a technology group that develops, implements, and maintains an educational technology infrastructure to encourage the thoughtful evaluation of technology for pedagogical advancement.
q. to provide information about the digital learning lab, teaching lab and technology classrooms
r. to offer pedagogically oriented learning spaces and classrooms for holding special class sessions, and consultative services around Learning Space design.: Digital Whiteboards, StatLab Facilities
s. to raise awareness of open educational resources on campus

Assessment and evaluation

t. to assess the impact of technology on student learning
u. to use technology for testing, assignments, or informal feedback about student learning
v. to provide free Test Scanning Services to all faculty

Self-study

w. to inform about Instructional Media Services
x. to give handouts for faculty who wish to develop an online course (with links to time and cost considerations and quality standards)
y. to put together a step-by-step summary that integrates information on needs assessment, academic approval, instructional design, and other elements
z. to provide tutorials, commentaries and advices on Using/Misusing of PowerPoint
aa. to present an overview of teaching online and hybrid courses
bb. to provide an overview of teaching with personal response systems "Clickers" and using them effectively
cc. to provide information about Online Teaching Resources, Moodle, MOOCS on Coursera and edX, Academic Medla Technologies, More and Contact Info
dd. to demonstrate technology initiative samples around the World
ee. to present the use of media and technology for educational purposes
ff. to provide links to resources for effective oral and poster presentations
gg. to offer Separate links for Adobe Connect, SharePoint, JHBox, VoiceThread

Table 108 (cont'd)
Typological classification of purposes for instructional technology

hh.	to introduce JHU Libguide -Art Related Images, Visual Resources Collection, Freely Available Images and Multimedia for Educational Use, Performance of or Showing Films in the Classroom
ii.	to provide videos for content and design concept-white space
jj.	to create a new online learning platform
kk.	to offer links to university e-learning contacts, faculty resource directory, national and state organizations, technology tools , best practices, development opportunities, feasibility
ll.	to offer Classes v2, Course Websites and Blogs, Classes v2 Canvas Pilot Spring 2016 office Hours
mm.	to advocate for streamlined policies, Oversees MOOC partnership, provide leadership for inter-institutional online partnerships related to online learning,
nn.	to give handouts on creating a video lesson, making a video or audio clips, organizing/managing teaching resources, personal digital asset management, recording a podcast, recording lecture or presentation and synchronous online collaboration
oo.	to provide information about Tablet Loaner Program and Media Equipment Checkout
pp.	to engage in ongoing benchmarking of institutional capacity and tracking of metrics
qq.	to show the list of MOOCs developed by faculty
rr.	to show how other faculty use technology in their teaching.
ss.	to compile a list of services: emerging technologies and digital pedagogies, consultations, tools for teaching with technology, classroom technologies, technology training
tt.	to provide information about active learning, automated learning(bubble-sheet assessments), classroom backchannel, classroom response systems and polling, flipped classrooms and blended learning, instructional materials development, lecture and lesson capture, low-stakes assessment, presentation technologies, survey tools, tests and assessments, universal design for learning (teaching for diversity and inclusivity)
uu.	to list technology ideas: Annotated Maps/Timelines, Annotation and Knowledge Resource Creation, Audio and Video Production, Collaborative Translation and Transcription, Field Data Collection, Interviews, and Walking Tours, Multimedia Collection Development, Network Visualization, Mapping Spatial Data, Text Analysis, Text Encoding and TEI, 3D Modeling / 3D Scanning, Writing, Hypertext, and eBooks
vv.	to introduce a short online course open to all staff
Consultation	
ww.	to provide links to evaluating your online course and development opportunities
xx.	to offer links to getting started with classroom technology, PowerPoint, blackboard, video, classroom response systems, survey tools, online discussions, ePortfolios, blended learning
Workshops	
yy.	to offer a week-long institute for faculty who want to redesign a traditional course into a hybrid, blended, or online format.

II.   Organization

a.	to offer an interactive, wiki "encyclopedia" aiming to gather, organize and circulate local knowledge about effective learning in the university context.
b.	to implement creative and innovative solutions to support the center's research and education mission, development, and outreach.
c.	to create award-winning videos and animations for news, marketing, event, and outreach purposes
d.	to record, live broadcasting, and to provide audio visual support for lectures and events, to realize faculty's vision for their online courses, to create figures, illustrations, and animations for scientific publications and videos,
e.	to design and install new technologies and capabilities for classrooms, lecture halls, and meetings spaces

III.   Academic and professional development of students

a.	to provide an environment where students can engage in flexible learning, anytime, anywhere. Participating lectures are video recorded and made available for them to view online as internet video within 24 hours of the live lecture.
b.	to offer online non-degree programs, MOOCs, Seminars, Lifelong Learning, videos for students on different areas of professional development

The purposes of instructional development focus on the areas of teaching and

learning, assessment and evaluation, self-study, consultation and workshop. They

provide technological support for all faculty and instructors through introducing several web tools, ideas to integrate technology into classes, consultations on any topics regarding the use of technology, workshops, test-scanning services and online and hybrid learning opportunities.

The instructional technology practices of the top universities aim to provide platforms where technology can be used as an effective tool to implement the most effective teaching practices, support the organizational growth of the centers as well as the academic and professional development of the students. They facilitate collaborative learning and self-directed learning.

Management of grant-funded projects

Management of grant-funded projects put emphasis on organizational development. The purposes include offering the details about grant-funded projects that foster professional development and growth such as listing outreach components, center representatives, program evaluation, project development and design research methodology. They inform faculty, students and representatives about the organizational structures of the projects

Table 109
Typological classification of purposes for management of grand-funded projects

I. Organization
  a. to enlist educational outreach components of scientific grants and stand-alone proposals for K-12 educational programs
  b. to develop strong educational outreach components for grant proposals.
  c. to create programs that provide rich experiences for target audiences and meaningful professional development and growth for participating
  d. to offer center representatives and review criterion link
  e. to support program evaluation for grant reporting and program improvement
  f. to deliver program assessment handbook
  g. to house and incubate faculty-driven projects related to teaching and learning.
  h. to give information about project development, design research methodology, partnerships

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Management of grant-funded projects initiatives of the top universities provide informative resources as self-study for the target audiences. They offer easy access to information for the audiences who are interested in participating.

Orientations

Orientation initiatives mainly focus on organizational and academic and professional development of the students, but they tend to put more emphasis on instructional development. The purposes of organizational development include promoting the safety and well-being of minors and providing guidelines and information as well as related forms. Academic and professional development purposes aim to provide language support for international students and TAs through language programs and discussion groups, instructional orientations for new TAs and assistance for doctorate students to get accustomed to the intellectual climate.

Table 110
Typological classification of purposes for orientations

I. Instruction

    a. to provide new ladder-rank faculty with the knowledge, tools, and inspiration to achieve the university's high expectations for teaching excellence while benefiting from becoming part of a cohort of peers across many disciplines

    b. to provide links to the resources important for new faculty such as resources for new faculty, teaching excellence colloquium, individual consultation, campus connections, new faculty teaching newsletter, mailings list

    c. to offer handouts for getting started as a successful TA, Handouts from the 2014 TA Orientation as well as university policies

    d. to design, implement, assist with, and evaluate programs that prepare new TAs for their teaching roles and support all TAs as they carry out their teaching responsibilities.

    e. to provide links to university policies, logistics, teaching resources, funding sources for instructors, grants

    f. to accompany and counsel assistant- and newly appointed professors during a two-year period at the beginning of their academic career , the program aims to support and assist them in their new role as university teachers, and facilitate cooperation among colleagues who find themselves in similar academic teaching and leadership positions.

    g. to provide a teaching and learning forum in which participants engage with a multidisciplinary, cross-cultural mix of doctoral candidates and post-doctoral fellows.

    h. to provide new faculty members with an opportunity to learn about the many resources and services available on campus to support teaching and student learning

    i. to provide links to various topics for consultation such as Apply for an Advanced TA Position, Ask peer or mentor to observe teaching, attend an educational conference, attend TA meetings within their department, attend TA department orientation, create a development plan , creating teaching portfolio and so on.

Table 110 (cont'd)
Typological classification of purposes for orientations

	j.	to provide orientations to new Teaching Assistants about meeting in small groups with students, leading discussions and problem solving sessions, teaching labs, consulting with students in office hours, grading and assisting in the design and delivery of courses.and FAQs.
	k.	to provide detailed information about Blackboard 9 with documents, support contacts, training sessions information
	l.	to conduct training sessions, both for first-contract TAs and for TAs with responsibilities to lead tutorials.
	m.	to help non-native English speaking instructors improve their language and cultural awareness in order to teach effectively in the US
	n.	to help departments screen graduate students who have been proposed to work as teaching assistants,
	o.	to support the wider university community by helping faculty and staff respond to the increasing cultural and linguistic diversity on campus and to foster a productive learning environment for all students.
	p.	to help new faculty and GSIs learn about the student profile, find the resources they need to be successful, and begin to develop a community of colleagues.
	q.	to provide orientation to new faculty after one week mandatory online course.
	r.	to help faculty think strategically about teaching, learn more about active learning and interactive teaching, and talk with other faculty about teaching at the university
II.	**Organization**	
	a.	to promote the safety and well-being of minors
	b.	to provide guidelines and information as well as related forms
III.	**Academic and professional development of students**	
	a.	to offer summer orientation, courses, tutorials as well as conversation partner programs for international students
	b.	to list of programs and services for students: specialized undergraduate teaching assistants orientation, summer workshops, programs for peer tutors, educational outreach programs.
	c.	to help prepare newly appointed international TAs for their roles as graduate Teaching Assistants and to assist them while they are teaching.
	d.	to offer links for international TAs, for faculty working with international TAs, for departments employing international TAs
	e.	to inform about life as a doctoral student, international students and ensuring inclusivity
	f.	to conduct orientation and courses following the evaluation of the proficiency levels of incoming graduate students who are non-native speakers of English
	g.	to offer information about English Language Program(ELP) rating, ELP opportunities and requirements, follow up testing
	h.	to offer information about discussion groups, English language program workshops and teaching in higher education context
	i.	to help non-native English speaking graduate students become fully integrated into the academic community through the English Language Program.

As for instructional development, the purposes include assisting new faculty on their new teaching responsibility, language support for international instructors, technological orientation, professional and academic support for early-career faculty through a program, online orientation, small group sessions to collaborate with colleagues, online platforms for researchers to communicate knowledge and experiences and guidelines for policies. Purposes are also related to supporting departments so as to help them screen graduate students who have been proposed to

work as TAs. The orientation activities of the top universities aim to offer platforms where all students, faculty, TAs and departments get professional and academic support to carry out their roles in the community efficiently by attending purposefully organized orientation workshops, programs and courses as well as being offered several online hand outs and guidelines. These orientation services facilitate collaborative learning as well as self-directed learning and reflective practice as they provide platforms where audiences can communicate with their peers and learn from each other's experiences.

Planning

Planning implementations focus on instructional development. Its purposes include incorporating community learning, student feedback, multicultural content or technology into a course plan, creating clearly stated goals for student learning, developing assessment methods and innovative teaching strategies. In addition, it focuses on preparing a learner-centred syllabus and offering effective writing strategies.

Table 111
Typological classification of purposes for planning

I.   Instruction
  a.   to provide information to faculty members who are interested in community learning
  b.   to determine possible changes in the course to assist students in learning through small group method and survey methods
  c.   to incorporate technology into a course plan
  d.   to develop clearly stated goals for student learning
  e.   to develop methods for assessing student learning
  f.   to prepare a learner-centered syllabus
  g.   to design innovative teaching strategies
  h.   to incorporate student feedback into course plan
  i.   to infuse multicultural content into a course
  j.   to present handouts on designing effective writing assignments
  k.   to offer effective writing strategies to help prepare assignments.

Planning a course initiatives of the top universities provide platforms in which faculty can benefit from various resources and consultation services depending on their needs and interests in course plan and syllabus design. They offer consultations, self-study resources and feedback opportunities for planning changes.

Community-campus partnerships

Community-campus partnership initiatives focus on organizational and curricular development. The purposes of organizational development include enhancing teaching and learning activities through different partnerships and information exchange. In order to do that, top universities focus on introducing faculty members to community partners who are interested in service learning projects, listing the principles of partnerships, presenting contact information for organization managers, FAQs and several projects being implemented as well as school and college partners.

Table 112

Typological classification of purposes for community and campus partnerships

I. Organization
   a. to introduce faculty members to community partners who are interested in service learning projects.
   b. to list the principles of good community-campus partnerships
   c. to provide contact information for organization managers
   d. to list FAQs for Community Partnerships
   e. to list several projects that are ongoing
   f. to offer the list of Provost office Affiliates, other Teaching and Learning Partners, school and College Partners
   g. to enhance teaching and learning activities through different partnerships
   h. to be represented in various associations and to cultivate this way the scientific exchange

II. Curriculum
   a. to connect people and resources with teachers, students, and members of the general public.
   b. to develop strong educational outreach programs that exhibit the highest standards of (STEM).
   c. to connect researchers with K-12 schools and classrooms where the curricular emphasis is most compatible with the subject matter and goals of each initiative.
   d. to work with local teachers in advance to prepare their students for campus visits and classroom visits by engineers and scientists to ensure that optimal benefit.
   e. to held meetings of outreach coordinators campus-wide, providing forum for sharing events, updates, resources, needs and opportunities.

Community and campus partnerships facilitate critically reflective practice as they provide students with the opportunity to get connected with the members of the general public through partnerships and gain practical competence with the assistance of professionals as coaches. These partnerships create projects that students, faculty and teachers can all get involved.

Teaching

Teaching initiatives focus mainly on academic and professional development of students, but they tend to put more emphasis on instructional development. The purposes of academic and professional development of students include offering PAL (peer-assisted learning) where volunteer second-year students are trained and paid to help students on the same course in the following year. This teaching opportunity is beneficial in two ways: it enables second-year students to improve their understanding of the subject matter and discover their own teaching and learning strategies as well as to help freshmen settle into university life.

Table 113
Typological classification of purposes for teaching

I. Instruction

Consultation

a. to offer permanent consultancy on teaching, testing and evaluation through an appointment
b. to provide scaffolding, Diversity, Inclusive Teaching, Multicultural, Teaching Strategies
c. to offer a variety of services and programs for faculty who are interested in pursuing new and innovative approaches to teaching, want to learn more about teaching methods relevant to their courses, or want to consult about ways to improve their teaching and their students' learning.
d. to help an academic unit's specific teaching and learning needs.
e. to address the benefits of private consultation on teaching
f. to provide customized services for departments, schools, and colleges to respond to their particular teaching and learning needs.
g. to help academic units explore innovative pedagogical approaches, collecting data to inform curricular revision or the evaluation of educational grants, and providing resources for designing and running effective GSI training programs.
h. to provide assistance on lecturing skills and techniques, course design, creating assignments, paper topics and exams, course and TF management, discussion leading skills and techniques, interpretation of mid-course and final Q evaluations, grading and giving feedback to student work, grading equity over a large course, problem solving specific issues in a course or section, internal staff difficulties, videotaping and class observations and low Q scores

Table 113 (cont'd)

Typological classification of purposes for teaching

i.	to discuss teaching situations encountered by TAs and options for applying research-based best-practices to support learning in these situations. skills in students, receiving and using student feedback

Self-study

j.	to inform faculty about the issues "Diversity and Inclusion", "effective faculty videos", "GSI teaching videos" and" journals" via links.
k.	to provide information about tutoring and learning support for students, promoting active learning, learning activities, learning matters
l.	to offer links to project management essentials, difficult conversations, assertiveness, presentation skills, working with challenging behaviour
m.	to suggest ideas for faculty and teaching assistants on teaching in various contexts: Teaching labs, teaching studios, teaching small discussion sections
n.	to inform faculty about flipped classroom by focusing on teaching and testing
o.	to list guidelines of improving oneself as a teacher, articulating a compelling narrative about development as a teacher, job market reports
p.	to inform faculty about lab/field classroom by focusing on teaching and testing-grading
q.	to inform faculty about lecture classroom by focusing on teaching and testing-grading
r.	to inform faculty about MOOCs by focusing on teaching and testing-grading
s.	to inform faculty about the center's services by focusing on teaching and testing-grading
t.	to celebrate excellence in teaching and showcase the leadership of staff and nationally through the best teaching samples
u.	to list some resources to help faculty to quickly and easily integrate writing into their teaching practice: Propose a WR course, planning wr course, designing assignments, in-class activities, addressing academic integrity and plagiarism, writing guides, useful links, faculty guide to writing resources for students
v.	to give information about teaching administrator
w.	to offer introduction to object-based learning at the university with links to Moodle, object e-resources, case studies
x.	to present detailed information about practice, design, assessment, communication and documentation with separate links

Programs and Services

y.	to work with academic departments to develop ways that the methods of theatre can act as vehicles for maximizing effective pedagogy and classroom engagement
z.	to help improve the teaching skills of doctoral students in preparation for academic careers: Teaching College Level Science, Communication Skills for Academics, Workshop in Strategies for Effective Teaching, Advances Speaking and Critical Listening
aa.	to develop the teaching skills of graduate student s and post-docs
bb.	to provide the Graduate Teacher Certificate
cc.	to offer a Seattle-based theatre company devoted to personal and community transformation through performing arts, partnerships and education that focuses on intersectional, critical dialogue on issues such as White Privilege, Racism, Heterosexism, Policed Bodies, Socioeconomic Classism, Ableism, and Microaggressions.
dd.	to inform about research opportunities on teaching
ee.	to provide information on how to create open online courses
ff.	to assist on how to evaluate students who take these online courses
gg.	to give information about a teaching program
hh.	to support civically engaged curriculum development in two main areas: service learning courses and internship courses.
ii.	to describe examples of great teaching and learning in different modes, including candid reflections on lessons learned through a blended course
jj.	to support the development of projects that serve as catalysts for effective and inspiring transformations in face-to-face, online, and blended learning, and that have broad impact at the university and beyond.
kk.	to use theatre to enhance teaching and learning and improve institutional climate. There are several links and their sub-categories (about the players, sketches and other services, booking the players, FAQS).
ll.	to encourage more substantive and stimulating conversations about teaching and learning through the formation of Quality Circles for Teaching
mm.	to offer links for Faculty Development Center for Medical Teachers
nn.	to offer a complete listings of courses provided by the Institute or organized through the Institute
oo.	to offer open classes on teaching and learning

Table 113 (cont'd)
Typological classification of purposes for teaching

pp.	to provide information on a class project that provides students with the opportunity to struggle through the application of course ideas and material, often the most difficult part of learning for students, with guidance from instructors as well as help from their peers
qq.	to assist staff to develop their full potential in the work that they undertake through the Erasmus Program.
rr.	to introduce Associates in Teaching Program which allows advanced Ph.D. students to expand their range of teaching experiences and responsibilities.

Feedback

ss.	to provide information about videotaping and class observation with a focus on each of their advantages and disadvantages
tt.	to provide information about planning approach, teaching strategies, student-teacher communication, small groups and discussions, evaluating your teaching, evaluating students

Workshops

uu.	to host teaching weeks, which is a campus-wide celebration of teaching and learning, featuring conversations with faculty, students, staff, and renown guest presenters.
vv.	to bring together faculty members, graduate students, librarians, and staff educators for a series of meetings on like-minded topics a few of the things that participants walk away with.
ww.	to host events in support of teaching excellence by Faculty Teaching Colloquium, faculty innovation showcase, academic integrity and the millennial generation
xx.	to provide a forum where all instructors who share this interest can learn of their colleagues' work and engage in discussion. The event includes a keynote talk and two poster sessions. Posters presented each year range from classroom/action research to published research.

II. Academic and professional development of students

a.	to offer PAL (peer-assisted learning) where volunteer second-year students are trained and paid to help students on the same course in the following year.
b.	to help second-year students improve their understanding of the subject matter and work through common problems and further develop their learning strategies.
c.	to help freshmen to settle into university life.

As for instructional development, the purposes include offering consultation and assistance for faculty, instructors and departments on a wide range of areas related to teaching, self-study resources on how to teach according to the needs and demands of these institutions and instructional development, several teaching programs and services being implemented at the institutions, feedback and evaluation services and workshops on teaching and learning. Teaching initiatives of the top universities provide platforms for access to information, enhancing teaching skills, sharing with colleagues, experts and graduates as entrepreneurs, instructional and professional development.

Donations

Centers asking for donations aim to improve organizational development. Their common purpose is to encourage people to support the centers' innovative programs and create the opportunity for programs to function better with solid financial support.

Table 114
Typological classification of purposes for donations

I. Organization
    a. to encourage people to support the centers' innovative programs

Donation initiatives of the top universities include providing financial assistance and support through incentives. They list the information about how the donations can be made and what purposes they are going to be used.

Engagement in national projects

Engagement in national projects initiatives focus on organizational development. The purposes include increasing public awareness and understanding of basic science and engineering principles through an educational outreach program, introducing local and regional elementary, middle and high school students, teachers and parents to "cutting-edge" science and technology, inform, inspire and motivate community through national projects and listing related announcements and events, sample projects, information for parents and teachers.

Table 115
Typological classification of purposes for engagement in national projects

I. Organization
    a. to increase public awareness and understanding of basic science and engineering principles through an educational outreach program
    b. to expose local and regional elementary, middle, and high school students, teachers, and parents to cutting-edge science and technology.
    c. to inform, inspire, and motivate specific audiences through both informal and formal education tools and mechanisms

Table 115 (cont'd)
Typological classification of purposes for engagement in national projects

d.	to list announcements and events, sample program ,About US section , information for parents and teachers ,Teaching and Learning, Events	

Engagement in national projects initiatives of the top universities include attempts to increase public awareness on basic science, engineering and technology and increase motivations of the faculty, teachers and students.

Speeches

Speeches held by the top universities tend to focus on organizational development as they all contribute to the visibility of the center as a formal teaching and learning center. The purposes include fostering further development of the center by organizing speeches about the all planned initiatives by the centers for the next years to inform the community and listing the videos of previous speeches.

Table 116
Typological classification of purposes for speeches

I.	**Organization**	
a.	to list all upcoming speeches about the further development of the center as well as the previous ones conducted in the university to inform the community	

Speech services delivered by the top universities include informing the audiences about the organization of the centers such as their annual plans.

Degree programs

Degree programs offered by the centers focus on academic and professional development for students. The purposes include offering international studies at the university through degree programs, courses and internship opportunities.

Table 117
Typological classification of purposes for degree programs

I.	**Academic and professional development of students**	
	a.	to offer international studies with degree programs, courses and internship opportunities

Degree programs offered by the top universities aim to foster professional

development of the students as they provide them a platform where they can attend

degree programs with internship opportunities depending on their interests.

Testing-grading

Testing-grading, or assessment and evaluation initiatives focus on instructional

development. Their purposes focus on areas of testing-grading programs and

services, self-study resources on assessment and evaluation and consultation sessions

to provide assistance to faculty.

Table 118
Typological classification of purposes for testing-grading

I.	**Instruction**	
	Programs and services	
a.		to provide free basic exam scanning services to any instructor who uses the standard orange or green answer sheets for an official class at the university: test scanning fees, FAQs, interpreting test results, Scanning office Records Handling Policy
b.		to ensure that faculty's learning goals, instructional practices, and assessment techniques are all well aligned through documented guidelines
c.		to provide faculty and staff an opportunity to have a data-driven discussion on program environment, student and faculty needs, policies and procedures, and educational outcomes and impact
d.		to reveal program strengths and potential limitations, and recommend improvements through outcomes assessment
	Self-study	
e.		to offer links to the overview of testing and grading, best practices for designing and grading exams, grading lab reports, evaluating student writing as well as academic integrity, incivility in the classroom and ethical development
f.		to give a detailed description of what "assessment" and "evaluation" are.
g.		to give information about assignments
h.		to give information about assessment
i.		to offer information about grading
j.		to offer basic guidelines of classroom management and testing and grading
k.		to offer links to what do students already know, measuring student learning, using rubrics, asking good test questions, self-assessment, peer assessment, assessment resources
l.		to provide links to strategies for assessing students in your courses, developing a plan: assessment guide for courses and programs, developing a plan: assessment resources at the graduate level, center working sessions on learning outcomes and assessment, what students already know, measuring student learning, using rubrics, asking good test questions, self-assessment, peer assessment
m.		to serve as handouts for methods overview, multiple choice questions, feedback and exams

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Table 118 (cont'd)
Typological classification of purposes for testing-grading

n.	to explain other ways to assess, from presentations and portfolios to essays and article reviews – and all of them can be used in different ways to enable students to demonstrate what they know
o.	to show videos, quick guides and documents about student assessment
	Consultation
p.	to address the missions of the center in terms of assessment
q.	to offer private consultation on assessment upon request

Testing and grading initiatives of the top universities include designing assessment materials and interpretation of results through consultations, and services offered by the testing services, study resources and statement of policies. They offer platforms where all instructors, even the ones who are not part of these university communities can benefit from assessing and evaluating student performance effectively through online resources and staff-specific consultation. In addition, free scanning services are available.

Further discussion on services and purposes

The study offers a typological classification of the main services offered and purposes served by the teaching-learning centers of top-universities within the framework of Lee's (2010) classification of services and Robertson's (2010) classification of developmental purposes

Services offered by the teaching-learning centers of the top universities are ideal for all audiences indicated in Table 3. There are many services that suit the needs of some groups, especially ladder-faculty, non-ladder faculty, instructors, early-career faculty, new faculty, graduate students and undergraduate students. Most self-study resources, except for the online platforms that require member log-in, are open for

the access of all users including people who do not work for or study at these particular institutions.

Services and purposes within the framework of andragogy

Services offered by teaching and learning centers support major adult learning theories in many aspects. First of all, the online platforms through which centers deliver some of their services such as online courses and self-study resources provide easy access to information and enable adult learners to learn best when they are in an environment they feel at ease as Knowles (1970) asserts with his andragogy as a learning theory. Another aspect is that andragogy as a learning theory prescribes a process of self-evaluation for learners (Knowles, 1970). Most faculty development centers provide instructors with the opportunity to evaluate their teaching through several services such as individual consultation sessions, early or end of semester student feedback, faculty visit days or micro teaching sessions for TAs. These centers provide audiences with the chance to reflect on their teaching practices through different perspectives.

Services and purposes within the framework of self-directed learning

Online teaching-learning or faculty development centers promote self-directed learning as well because learners can access a virtually unlimited range of information pertaining to their learning needs and interests; store and manipulate information, and can contact with fellow learners and experts, which are all satisfying for their self-directed inquiries whereas developers can spread and develop their offerings easily through online platforms (Candy, 2004). According to self-directed learning theory, there are three classes of learning motivations: goal-oriented

learners, activity-oriented learners and learning-oriented learners (Candy, 2004) and this study shows that some of the services provide platform for such learners. Certificate programmes, or other non-degree programs are suitable for activity-oriented learners whereas workshops, seminars and speeches on instructional development are appropriate for both goal-oriented and learning-oriented learners depending on the content of services and the purposes of participants. For example, career support services address both goal-oriented and activity oriented learners as they offer professional development review schemes, provide a network and advice for internal job application procedures, information about tenure and promotion rules, and offer developmental opportunities.

Courses also promote self-directed learning in that they provide platforms for goal-oriented learners for their short term and pragmatic concerns about their teaching. In addition, mentoring provides self-directed learning opportunities for audiences as they provide platforms for activity-oriented learners to get a certificate or a post-graduate diploma through programs or improve their mentoring skills through mentoring programs. Publications are also among the services that promote self-directed learning through self-study resources for goal-oriented learners who wish to improve their researching skills for future publications. Another service offering self-directed learning opportunities is awards as they motivate learning-oriented learners to develop in their profession and become eligible for winning an award.

Faculty fellowship opportunities provide self-directed and collaborative learning opportunities as they enable audiences to gather around a common point of interest and learn from each other's experiences. Instructional technology services also

promote self-directed learning opportunities for faculty, instructors and students

through all web tools, online teaching programs and consultation on how to benefit

from these tools in classroom environment. These instructional technology services

seem to support the idea that self-directed learning, online learning and computer

literacy skills are also interrelated (Candy, 2004) as they help users gain the

necessary computer literacy skills to achieve their long-term or short-term

instructional goals. For instance, instructors are guided to use several e-learning tools

such as Moodle, Lecturecast, electronic voting systems, Turnitin, myportfolio, web-

conferencing, open educational resources or flipping their classroom through

consultations, tutorials and informative PDF or html documents.

Services and purposes within the framework of reflective practice

There are some services offered by the centers in line with reflective practice theory.

Video-taping of teaching and follow-up consultation sessions on the strong areas and

areas for improvement seem to enhance the practice of *reflection on action* proposed

by Schön (1987) as they promote thinking through subsequent to situation. These

consultation support sessions aim to foster *reflection in action* skills of faculty so that

they can think ahead, analyse, experience and critically respond to all situations that

they may encounter during teaching. In addition, community-campus partnerships

promote reflective practice as they provide students with the opportunity to get

connected with the members of the general public through partnerships, and gain

from practical competence with the assistance of professionals as coaches.

Services and purposes within the framework of critically reflective practice

Evaluation of teaching services facilitate critically reflective practice as they provide the instructors with the opportunity to reflect critically on their teaching activities through the lens of their own autobiographies as learners of reflective practice on consultation sessions, the lens of learners' eyes with student feedbacks, the lens of colleagues' perceptions with workshops and the lens of theoretical, philosophical, and research literature with self-study resources.

Courses also provide platforms where critically reflective practice is promoted by helping students reflect critically on what they learn through the lens of their peers' perspectives in work groups or lower division seminars. The peer or colleague perspective is also utilized during micro teaching sessions for TAs or faculty visit days.

Centers also provide rich self-study resources on various topics and they all facilitate critically reflective practice as they enable users to connect with the related literature on topics they consult.

Services and purposes within the framework of transformative learning

Learning-centers offer various services aiming at transformative learning for various learners. Mezirow (1997) claims that it is not enough for people to acquire knowledge; they also have to possess the skills of understanding, and manipulating them especially in the workplace. For faculty members who have classes to teach should not be satisfied only with their subject-area expertise. They should seek ways to improve their teaching skills and they should be open for academic and

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professional development. At this point, faculty development centers serve as platforms where faculty members, students, anyone who is a part of higher education can improve themselves through development review schemes, consultations, programs, courses, speeches, workshops, instructional technologies, evaluation of teaching services and self-study resources. All these services can yield to transformations in their learning and teaching.

Community services include several opportunities for participants to contribute to the community such as civic engagement minor programs, community service programs through which they can promote literacy among preschool students, internship opportunities or scholars program. All these services that centers initiate foster transformative learning as they enable participants to experience the four processes of learning, and transform their habits of mind through a critical reflection of their generalized bias in a different way. In other words, learning does not solely depend on a particular epistemology which lacks practical competence, but internship opportunities or community learning opportunities through which they can serve to the community, and they learn values that they may not learn from campus courses.

Services, purposes and historical context of faculty development

This study shows that teaching-learning centers of the top universities reflect earlier emphases during different decades. Sorcinelli, Austin, Eddy and Beach (2006) categorized the evolution of faculty development into four main ages: scholar, teacher, developer, learner and the age of the networker (as cited in Ouellet, 2010). As the *Scholar Age* emphasises, there are, for example, services promoting research projects and scholarly expertise. As in *the Age of the Teacher,* some services support

the pedagogical and instructional skills improvement of the instructors through many services. Just as in *the Age of the Developer,* there are services supported by institutional as well as foundation funds, providing means for evaluation. Just the same as what is focused on *in the Age of the Learner*, the centers place emphasis on active and collaborative approaches and problem and inquiry-based learning strategies as well as computer literacy, interdisciplinary teaching and web-based instruction. They offer rich self-study resources about the 21st century teaching methods, flipped classrooms, technology classrooms, online courses. Finally, instructional technology initiatives of the centers aim to equip all staff and students with the necessary skills for *the Age of the Networker*. As the technological advancements have been increasing rapidly, several web tools are offered for the use of faculty, staff, departments and students to save time and enrich teaching and learning. Brooks (2010) proposes that a hybrid faculty support program and the facilitation of virtual platforms on campuses should be developed by faculty members. Hybrid learning blended learning and flipped classroom concepts have been widely discussed and practiced by most of the centers nowadays. In addition, teaching-learning centers promote collective development in the form of instructional technology units and assessment offices. They work collaboratively with other units or in some cases, these units run under a single development center.

Systematic evaluation of teaching-learning centers

Kreber and Brook (2001) identified a lack of systematic program evaluation in the area of faculty development or teaching-learning center programs. They offered a faculty development evaluation model which includes six levels of evaluation and eight major questions for any of these levels to be asked. They concluded that the

proposed model had to have five common staff development interventions: a centralized course on learning to teach in higher education, individual consultations with teaching staff, seminars/workshops, collaborative action research studies on teaching and peer consultation programmes. Although the centers of the top universities mainly offer seminars and workshops on teaching and learning, development courses for students and faculty, individual consultations with teaching staff and some peer consultation programmes such as open class days or visit a class days, the majority of the centers seem to lack collaborative action research studies on teaching and centralized course on learning to teach in higher education. Centers mainly present their mission statements and goals or annual reports online, but they do not present any evaluation program they use to evaluate the effectiveness of their programmes or assessment of outcomes.

Academic and professional development of students: A fifth area of focus

The researcher used the framework of Robertson's developmental focus areas to explore the purposes of teaching-learning centers of the top universities serve to: faculty development, instructional development, curricular development and organizational development. During the data analysis, the researcher encountered some services whose purposes do not fall into any of these categories. There are fifteen services aiming at the academic and professional support for students (Figure 9). Most of the research literature focuses on services that promote skills and competencies of faculty or instructors. However, teaching-learning centers of the top universities offer various services and programs that promote the professional and academic growth of undergraduate or graduate students in many aspects. Thus, the

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analysis of these services and purposes resulted in the development of a fifth area of focus.

Implications for practice

This study has generated a number of teaching-learning center initiatives that would be of interest to faculty, instructors, students, teaching assistants, departments as well as program developers. First of all, it provides information about the concept of faculty development, the trends in faculty development around the world with historical context and why teaching-learning centers are important in higher education nowadays. Then, it presents data about the main services and sub-services of the top universities as well as their duration and target audiences within the Robertson's classification of developmental purposes. The purposes of each main service have been analysed and the results have yielded to a systematic typological classification of purposes. The study highlights the most commonly offered practices by the best teaching-learning centers, missions and purposes of these practices within faculty development literature. The outcomes of the study provide a structure to guide the development of such centers and insight for faculty developers to determine the mission(s) of the center and service. They may benefit the results of this study to determine the program's mission and the kinds of development to which the program will attend.

This study can serve as a starting point for researchers who are interested in the trends in faculty development. In addition, instructors, faculty, teaching assistants, graduate students and post-doctoral researchers at higher education may also benefit

from this study in that they will be informed about the services they use as well as their purposes and missions through the theoretical lenses provided.

Implications for further research

The researcher used cross-case analysis to develop a typology of main services offered, and purposes served by the teaching-learning centers of top-universities in the world. There are other ways of conducting a cross-case analysis. The researchers interested in cross-case analysis may make use of other ways of cross-case analysis to conduct a similar study such as using taxonomic methods rather than typological classification.

The researcher used Robertson's (2010) classification of developmental purposes and Lee's (2010) classification of services to analyze and interpret the selected data. More data could be selected and same or additional conceptual lenses could be used to conduct similar studies.

This study used teaching-learning center web sites of the top universities in order to find out their offerings and their purposes. The purposes or the effectiveness of the services could be analysed through opinion surveys of target community or faculty developers.

This study also places some emphasis on the need to include, or to explore, systematic evaluation programmes to measure the effectiveness of teaching-learning centers.

Limitations

First of all, this study focused on teaching-learning center web sites so as to analyse the services being offered as well as their purposes. There may be other services of the centers that are not presented online or updated on the web site. In order to be able to fully analyse and interpret the services and their purposes and to gain more insight, it would be more effective to contact with the program developers or directors of the centers. Secondly, the user experiences may enable researchers to gain insight of the effectiveness of the designed programs. Another limitation of this study is that the researcher used Robertson's classification of developmental purposes and Lee's classification of services. Services and purposes can be analysed through different lenses and theories that can yield to different results.

Next, the data largely focuses on American universities except from two universities from Europe as they are recognized among the top universities according to the US World News and Rankings (2016). Thus, it reflects rather American tradition of teaching-learning centers. More data from different parts of the world, especially Europe can yield more comprehensive results in the field.

Finally, the services offered by the centers have been increasing in scope and content recently and their purposes may change accordingly depending on the changing needs. It may be necessary to conduct similar studies by taking into consideration the top universities and their services in the future.

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