Support Services for Students with Disabilities in Thai Universities: Satisfaction and Needs of Students and Service Providers

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Abstract

This study examined administration within Disability Support Service (DSS) offices in Thailand. Service provision in DSS offices and satisfaction and needs of service providers and students with disabilities were also explored. A survey that included structured interview questions was administered to 31 administrators of DSS offices. In addition, a needs and satisfaction questionnaire was used with 73 service providers and 204 students with disabilities who were part of the convenience sample for this study. Results indicated that most DSS offices in Thai universities are under the supervision of the Department of Student Affairs and that there is an average of three service providers per office. It was also found that DSS offices primarily provide Braille translation (67.74%) and equipment and assistive technology or software rental services (54.84%) for students. The service that seemed to be provided the least was counseling (19.35%). About 56.58% of service providers were satisfied with their work while 15.1% and 13.9% expressed dissatisfaction with university support and allocation of budgets respectively. Most service providers (84.8%) and students (77.4%) reported satisfaction with scholarships. Both service providers and students agreed that support for studying abroad is the greatest service need. Findings indicated that Thai DSS offices serve as one-stop centers and deliver services based on a reactive approach. In order to improve the disability support services, it is the responsibilities of university, faculty, DSS office, and student with disabilities and changing policy related to administration and crucial services that affect students' successful are proposed.

Keywords: Support services, DSS, Students with disabilities, Higher Education

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บทคัดย่อ

     การศึกษานี้เป็นการศึกษาการบริหารของหน่วยบริการสนับสนุนนักศึกษาพิการ การให้บริการ ความพึงพอใจและความต้องการของผู้ให้บริการและนักศึกษาพิการ โดยการสัมภาษณ์แบบมีโครงสร้างผู้บริหารหน่วยบริการสนับสนุนนักศึกษาพิการ จำนวน 31 คน และแบบสอบถามผู้ให้บริการ จำนวน 73 คน และนักศึกษาพิการ จำนวน 204 คน ซึ่งสมัครใจและมีเวลาในการให้ข้อมูล ผลการศึกษา พบว่า ส่วนใหญ่หน่วยบริการสนับสนุนนักศึกษาพิการในมหาวิทยาลัยของไทยอยู่ภายใต้ความรับผิดชอบของกองกิจการนักศึกษา และมีผู้ให้บริการในหน่วยสนับสนุนนักศึกษาพิการเฉลี่ย 3 คน บริการพื้นฐานของหน่วยบริการสนับสนุนนักศึกษาพิการ ได้แก่ การแปลงอักษรเบรลล์ (67.74%) การให้ยืมอุปกรณ์และเทคโนโลยีสิ่งอำนวยความสะดวกหรือซอฟแวร์ (54.84%) บริการที่จัดให้น้อยที่สุด คือ การให้คำปรึกษา (19.35%) ผู้ให้บริการประมาณ 56.58% มีความพึงพอใจต่อบริการที่จัดให้นักศึกษาพิการ แต่ 15.1% และ 13.9% ของผู้ให้บริการไม่พึงพอใจกับการสนับสนุนของมหาวิทยาลัยและการจัดสรรงบประมาณ ตามลำดับ ผู้ให้บริการ (84.8%) และนักศึกษา (77.4%) ส่วนใหญ่พึงพอใจกับการได้รับทุนการศึกษา ผู้ให้บริการและนักศึกษามีความเห็นตรงกันว่าการสนับสนุนให้นักศึกษาพิการได้ไปศึกษาในต่างประเทศเป็นบริการที่มีความต้องการมากที่สุด จากการศึกษาแสดงให้เห็นว่าหน่วยบริการสนับสนุนนักศึกษาพิการในมหาวิทยาลัยของไทยให้บริการแบบเบ็ดเสร็จและจัดบริการในลักษณะเชิงรับ จึงควรมีการพัฒนางานบริการสนับสนุนนักศึกษาพิการซึ่งเป็นหน้าที่ความรับผิดชอบของมหาวิทยาลัย คณะ หน่วยบริการสนับสนุนนักศึกษาพิการ และนักศึกษาพิการ โดยการปรับเปลี่ยนนโยบายที่เกี่ยวกับการบริหารและการให้บริการที่สำคัญซึ่งจะส่งผลต่อความสำเร็จของนักศึกษา

คำสำคัญ: บริการสนับสนุน, DSS, นักศึกษาพิการ, อุดมศึกษา

Introduction

The Persons with Disabilities Education Act was passed in Thailand in 2008. The law states that (a) students with disabilities may select any school according to their abilities and needs, (b) the educational quality provided to these students must meet the same quality standards for students without disabilities, and (c) appropriate accommodations and assistive technology should be provided to students with disabilities (Educational Provision for Persons with Disabilities Act B.E. 2551, 2008). Moreover, the government waives tuition fees for individuals with disabilities from kindergarten to the bachelor's degree level. The law also requires general education schools to provide services for students with disabilities in inclusive settings, special education schools to improve the quality of their education, and for higher education institutions to consider academic services including accommodation and assistive technology.

According to The Office of the Higher Education Commission, there was a dramatic increase in the number of students with disabilities enrolled in higher education institutions between the years 2004 and 2010 (Bureau of student development, 2012). Approximately 14 percent of students with disabilities continue on to higher education after completing high school (Bureau of Student Development, 2015). Attending a higher education institution differs from attending a secondary school in many aspects including the enrollment process, the variety of programs from which to choose, the size of lecture rooms, the large campus areas, and the availability of and access to various services. Students with disabilities must self-identify and request appropriate accommodations to receive academic and non-academic services in universities (Burgstahler, 2015; Stodden & Conway, 2003).

Disability Support Services (DSS) is a crucial component of student success because it supports faculty efforts to accommodate students' needs. Since institutions of higher education have the obligation to maintain their academic standards, the role of the disability support administrator is not only to support students but also to provide technical assistance to faculty and the administration such as educating them about the requirements of the law and helping academic programs formulate technical standards for participation (Gordon & Keiser, 2000). Therefore, the way institutions provide services to students is critical (DeLee, 2015). Self-determination theory proposes that there are three basic psychological needs that are supported by social contexts: (1) competence, (2) autonomy, and (3) relatedness. The psychological need for competence refers to the motivation to be effective within environments. The basic psychological need for autonomy describes the drive people have to be able to make choices and act volitionally. The psychological need for relatedness is the sense of connectedness and belonging with others (Wehmeyer, 2019). Providing support for student self-determination in academic setting is one way to enhance student learning and improve post-education outcomes for student with disabilities. Programs to promote self-

determination help students acquire knowledge, skills and beliefs that meet their needs for competence, autonomy and relatedness (American Psychology Association, 2004). Self-determination and transition plan is a primary indicator of quality services and a predictor for successful post-school outcomes (Van Laarhoven-Myers, Van Larrhoven, Smith, Johnson & Olson, 2016).

Institutions of Higher Education could use either an accommodation approach (reactive approach) or a proactive approach to support students with disabilities. Accommodation is a reactive approach which entails providing extra effort for students with disabilities including receiving material later than other students. The proactive approach aims to ensure access to a potential individual with a wide range of characteristics using barrier-free and accessible design, usable design, and universal design (Burgstahler, 2015). Disability Support Services offices are as diverse as the educational institutions they serve (Harbour, 2009). There are two models of disability support services which are a) centralized disability support services and b) decentralized disability support services. Centralized disability support services serve as one-stop center for any and all disability services and accommodations, whereas decentralized disability support services provide only those services not available elsewhere on campus and expect existing campus department and service units to develop expertise in meeting the needs of its students who have disabilities (Duffy & Gugerty, 2005).

Shaw and Dukes (2001) suggested that there is no single approach to disability services (as cited in Shaw, 2002), and Cox and Walsh (1998) asserted, "What might be appropriate to implement in one institution might not be suitable in another" (p.68). The Association on Higher Education and Disability (AHEAD) approved Program Standards for Disability Services in Higher Education developed by Shaw and Dukes (2001). These program standards reflect the minimum level of support that institutions should provide to students with disabilities and include nine categories: (a) Consultation/Collaboration/Awareness, (b) Information Dissemination, (c) Faculty/Staff Awareness, (d) Academic Adjustments, (e) Instructional Interventions, (f) Counseling and Advocacy, (g) Policies and Procedures, (h) Program Development and Evaluation, and (i) Training and Professional Development (Shaw, 2002).

Previous studies of disability support services in Thai universities reported broad guidelines for development of DSS services in the aspect of being the data center for students with disabilities, providing consulting services, implementing individualized service plans, coordinating with faculty and networking services (Kawai, 2017; Suoned & Changpinit, 2016). There has been little research conducted on the administration of DSS offices and the services they provide to students with disabilities in Thai universities. The purpose of this study was to investigate the support that students with disabilities receive in institutions of higher education in Thailand. The research questions for the study included:

1) How are the DSS offices managed?

2) What services do DSS offices provide for students with disabilities?

3) How satisfied are the DSS providers and students with disabilities with the administration and services?

Methods

Participants

According to the Bureau of Student Development, Office of the Higher Education Commission (2015), 31 universities reported that they had enrolled students with disabilities in their institutions and planned to provide services for those students. Therefore, we explored the service management and patterns of the 31 universities that provided services to students with disabilities. The participants in this study included a convenience sample of: (a) 31 directors or administrators in charge of DSS office, (b) 73 service providers, and (c) 204 students with disabilities.

Data Collection

A package containing an invitation letter and information about the study was sent to university administrators responsible for student support services after Institutional Review Board (MUSS-IRB) approval. Responses from interested participants were sent by email or FAX. Researchers conducted half-day visits to Disability Support Services offices in each of the 31 universities reported as providing services to students with disabilities. Researchers handed out the participant information sheet and obtained consent from participants before collecting data. The visits began with interviews

with university administrators or directors of the DSS offices (n=31). These interviews lasted approximately 60 minutes each and focused on the structure, function, administration, and management of the DSS office. Following the interviews, the research team toured each DSS office and distributed questionnaires to service providers and students with disabilities who consented to participate in the study and meet with the researchers.

Instruments

Structured interview questions and the Administration and Services Satisfaction and Needs questionnaires were developed based on the Program Standards for Disability Services in Higher Education approved by AHEAD (Shaw & Dukes, 2001) and adapted by the researchers to the Thai context. Interview questions like "What department is responsible for disabilities support services?", "How do students with disabilities apply to enter the university?", "What criteria does the university consider for acceptance?" and "What services does the university provide for students with disabilities?" were asked to directors or administrators in charge of DSS. The questionnaire for service providers and students included two sections: (a) personal demographic information about the respondents and, (b) information about their satisfaction with and needs for administration and services. The service providers were asked about the administration of the DSS offices (13 items) and the services that the DSS offices provided for students with disabilities (41 items). In addition, the students

were asked about the services available through the DSS offices (36 items). The participants responded to the questionnaire items using a Likert scale ranging from 0 to 5: "0"= No service, "1"=Very dissatisfied, "2"=Dissatisfied, "3"=Neither satisfied nor dissatisfied, "4"=Satisfied, and "5"=Very satisfied. Students with disabilities such as blind/low vision or deaf/hearing loss were supported by questionnaire reader or sign language interpreter. The questionnaires were trialed with other service providers and students. Content validity was addressed by reviewing of specialists. Reliabilities were addressed through Cronbach's alpha. The results were 0.89 for the service providers' questionnaire and 0.92 for the students with disabilities' questionnaire.

Data Analysis

Descriptive statistics were used to analyze data. The "very satisfied" and "satisfied" were collapsed into one category, as were the "very dissatisfied" and "dissatisfied" responses. Transcripts and written notes made during interviews were reviewed by Disabilities Support Services administrators and the service providers to obtain their input. Data obtained through the needs assessment questionnaire were analyzed with a modified priority needs index (PNI modified). The formula used for the calculation was the following (Wongwanich, 2005):

$$PNI_{modified} = \frac{I\text{-}D}{D}$$

$PNI_{modified}$ = priority needs index.
I = mean of need expectation
D = mean of current satisfaction

Score of $PNI_{modified}$ presents the high needs to low needs in descending order Results

Demographic information

Most directors of DSS Office (64.52%) and service providers (76.71%) are female. The average age of DSS office directors (41.93%) and service providers (52.05%) is between 30-39 years old. The experience in disability support administration of the DSS office directors is about 1-2 years (41.94%) and five years or more (41.94%). The majority of service providers had worked in disability support services offices less than five years (67.12%) and 56.16% of service providers also had less than five years of experience working with persons with disabilities. The service providers served students with a variety of disabilities such as physical disabilities (24.10%), hearing loss (19.28%) and visual impairment (19.28%).

The majority of students with disabilities who participated in this study (83.74%) are less than twenty years of age. The most common disabilities among students in universities were deafness (44.12%), blindness (13.73 %), and physical disability or students who use a wheelchair (13.24%). Other participating students identified as hard of hearing (9.31%) and having low vision (6.37%). The students with disabilities who participated in the study were primarily studying social science and humanity (22.92%), education (20.45%), business and economics (15.14%), and law and political science (14.05%). A small number

of the participating students were studying architecture (0.30%), music (0.48%), engineering (1.39%), and agriculture (1.69%).

Administration

It was found that there are different departments responsible for DSS office: (1) Student Affair Department, (2) Education/ Academic Service Department, (3) Faculty of Education, and (4) Independent Center. Most of the DSS offices (54.84%) are under the supervision of the student affairs department. However, universities that offer a degree in education (25.81%) have assigned responsibility for the DSS office to the faculty of education. Approximately half of the institutions follow written job descriptions in the absence of a policy committee (51.61%). The service providers in the remaining institutions have an established policy committee (48.39%). The universities generally do not use a quota for university admissions for applicants with disabilities. Instead, they accept applicants with disabilities that pass the entrance examination, which is consistent with the admission process for students without disabilities (64.52%). Only six of the 31 universities establish a quota for students with disabilities (19.35%), and five of the universities accept all individuals with disabilities who submit an application (16.13%). At the time of this study, there were about 1,658 students with disabilities and 99 DSS providers in the 31 universities that participated in this study. The ratio of providers to students with disabilities was about one provider to 17 students and an average of 3 service providers per office. The accessibility supports that universities provided

most often were ramps (51.61%) and toilets (45.16%). However, administers who were responsible to the DSS offices reported no clear understanding of the criteria to use to receive financial support from the government (54.84%). The biggest challenge of services is learning how to support students with disabilities to be successful in their studies and graduate (51.61%).

Services for Students with Disabilities

At the time of the study, the most common services that DSS offices provided to students with disabilities were Braille translation (67.74%) and equipment and assistive technology or software rental services (54.84%). Counseling (19.35%), note taking (25.81%), audio books (29.03%) and orientation and mobility (29.03%) services were less commonly provided services. A higher proportion of the general universities provided more time for examinations (60%) and equipment rental (80%) compared to the Rajabhat Universities (47.06%, and 52.94%, respectively). A higher proportion of Rajabhat Universities (41.18%), open universities (50%), and Rajamangala Universities of Technology (50%) provided more tutoring services than the general universities (10%). The open universities (50%) provided counseling service for students more often than general universities (20%) and Rajabhat Universities (17.65%). Rajamangala Universities did not provide counseling service at all. Students with hearing loss who responded to the survey were mainly enrolled in general universities (69.57%) or Rajabhat Universities (44.53%) but only 41.18% of the Rajabhat Universities and only 20% of the general

universities provided sign language interpreter services for these students. However, the ratio of sign language interpreters to students with hearing loss in Rajabhat Universities (20/258=1:13) was higher than that for the general universities (15/159=1:11).

Satisfactions and Needs Related to Administration

The majority of service providers who participated in this study (56.58%) reported that they were satisfied with their work in the DSS offices. Service providers reported satisfaction with were roles and responsibilities of DSS personnel (72.6%), guidelines or handbooks for services in the DSS center (67.1%), collaboration and coordination with professors and lecturers (63%), and with other services in the university (61.7%). However, a few of the service providers responded by reporting dissatisfaction in university support for the DSS offices (15.1%), the budget allocated by the Office of Higher Education Commission (13.9%), and guidelines about admission of students with disabilities (11%).

Considering satisfaction scores in DSS administration groups, the service providers of independent centers (M=3.90, SD=0.88) and student affair departments (M=3.60, SD=1.13) were satisfied with the physical environment accommodations on campus. Scores for education/academic services departments (M=3.33, SD=1.15) and centers under faculties of education (M=3.30, SD=1.21) were lower. The budget management by the university had the

lowest satisfaction scores for service providers in DSS offices under education/academic services departments (M=1.00, SD=1.73) compared to the other administration groups. The service providers in independent centers (M=4.10, SD=0.57) had higher satisfaction scores in university support for DSS offices than those in student affair departments (M=3.17, SD=1.32), education/academic services departments (M=3.00, SD=1.00), and in faculties of education (M=3.40, SD=1.07). The service providers in independent centers (M=3.90, SD=0.88) and faculties of education (M=3.83, SD=0.87) had higher satisfaction scores in collaboration and coordination with professors and lecturers than service providers in student affair departments (M=3.30, SD=1.15) and education/academic service departments (M=2.67, SD=1.15). The guidelines or handbook for services in DSS centers had the lowest satisfaction scores for service providers in student affair departments (M=3.17, SD=1.23) compared to the service providers in education/academic services departments (M=3.67, SD=0.58), education faculties (M=4.07, SD=1.01), and independent centers (M=4.10, SD=0.57). The greatest needs reported by the service providers (see Table 1) were university support for the DSS offices such as personnel, equipment, and devices (PNImodified=0.34), budget from the government managed by the Office of the Higher Education Commission (PNImodified=0.31), and physical environment accommodations and support on campus (PNImodified=0.27).

Table 1 Mean, Standard Deviation (SD), and Modified Priority Needs Index (PNIModified) of Service Providers' Satisfaction and Needs Related to DSS Office Administration

Office Administration	Satisfaction		Needs		PNI modified	Order
	M	*SD*	*M*	*SD*		
University support for DSS office such as personnel, equipment, devices, etc.	3.38	1.15	4.53	0.89	0.34	1
Budget from government managed by the Office of the Higher Education Commission	3.29	1.11	4.31	0.98	0.31	2
Physical environment accommodations on campus	3.51	1.13	4.46	0.92	0.27	3
Budget from government managed by the university	3.46	1.20	4.34	1.01	0.25	4
Collaboration and coordination with professors and lecturers	3.58	1.04	4.48	0.95	0.25	5

Satisfaction

The service providers were satisfied. (*M*=3.56, *SD*=1.11)

The highest satisfaction score of service providers were ser vice provider roles and responsibilities. (*M*=3.81, *SD*=1.14)

The lowest satisfaction score of service providers were Budget from government managed by the Office of the Higher Education Commission. (*M*=3.29, *SD*=1.11)

Need

The service providers were satisfied. (*M*=4.35, *SD*=0.97)

The highest need score of service providers were University support for DSS office such as personnel, equipment, devices, etc. (*M*=4.53, *SD*=0.89)

The lowest need score of service providers were Planning and Key Performance Indicator (KPI) of DSS office every year. (*M*=4.15, *SD*=1.06)

Satisfactions and Needs Related to Services

When the categories of rating scales were combined, interesting results were found. About 60% of service providers had satisfaction in overall services while 56.79% of students with disabilities had satisfaction. The result shows that all DSS offices in each university provided coordination of services for student instructors, assistance for students to enhance self-advocacy, providing consultation to develop self-esteem, and disability-specific scholarships. The services that the largest number of service providers reported satisfaction with were: (1) disability-specific scholarships (84.8%), (2) services according to code of ethics (81.7%), (3) equal access on campus (80.5%), and (4) services provided based on each institution's mission or service philosophy (76.1%). Providing consultation to develop self-esteem (73.7%), DSS staff knowledge and skills of disability support (73.2%), orientation programs (72.2%), and dissemination of information (70.9%) were rated satisfactory by many service providers. There were 26.4% of service providers who were dissatisfied with guidelines for reasonable accommodation, and 25.3% of those

were dissatisfied with tutoring services. In addition, a few service providers identified dissatisfaction in interpreter services/translators services (21.7%) and support for study abroad (20%). Approximately 4.3% of service providers reported that no interpreter services were available. For notetaking services, only 49.30% of service providers reported satisfaction, while 18.30% expresses dissatisfaction, and 9.9% provided no notetaking services. Moreover, service providers reported only 35.20%

satisfaction in tutoring services, 25.30% dissatisfaction, and 12.70% had no such services. The learning centers or resource rooms showed 51.40% satisfaction, 19.5% dissatisfaction, and 9.7% had no service. The service providers would prefer to offer more support services related to opportunities to study abroad ($PNI_{modified}$=0.50), tutoring ($PNI_{modified}$=0.43), and also to provide more learning center laboratories/resource rooms ($PNI_{modified}$=0.35) (see Table 2).

Table 2   Mean, Standard Deviation (SD), and Modified Priority Needs Index ($PNI_{Modified}$) of Service Providers' Reported Satisfaction with and Needs for DSS Office Services

Services	Satisfaction		Needs		$PNI_{modified}$	Order
	M	SD	M	SD		
Support for study abroad	2.67	1.76	4.00	1.39	0.50	1
Tutoring	2.89	1.59	4.14	1.29	0.43	2
Learning center laboratory/resources room	3.21	1.56	4.35	1.04	0.36	3
Establish guidelines for reasonable accommodation	3.00	1.47	4.04	1.27	0.35	4
Notetakers/scribes/readers services	3.15	1.50	4.21	1.19	0.33	5

Satisfaction

The service providers were satisfied. (*M*=3.60, *SD*=1.27)

The highest satisfaction score of service providers were Disability-specific scholarships. (*M*=4.32, *SD*=0.92)

The lowest satisfaction score of service providers were Support for study abroad. (*M*=2.67, *SD*=1.76)

Need

The service providers were satisfied. (*M*=4.30, *SD*=1.03)

The highest need score of service providers were Provide consultation with students with disabilities to develop self-esteem and confidence. (*M*=4.50, *SD*=0.86)

The lowest need score of service providers were Support for study abroad. (*M*=4.00, *SD*=1.39)

Students with disabilities (56.79%) were satisfied with the services overall. Most students with disabilities expressed satisfaction in disability-specific scholarships (77.4%), dissemination of information (71.4%), and coordination of other services on campus (70.4%). However, more than 15% of students

with disabilities reported dissatisfaction in some services. The services they were dissatisfied with were support for study abroad (21.8%), tutoring services (19.5%), equipment or software provision (19.2%), written policies for DSS (17.8%), skill training on equipment or software (17.4%), provision of services by

professionals (17.1%), support provided to develop memory skills (16.4%), problem solving skills (16.3%), and training to improve communication skills (16.3%). The students with disabilities reported the highest number of missing services were support for study abroad (16%), equipment or software provision (13.5%), tutoring services (13.2%), and interpreter services (11%). Although 55.30% were satisfied with notetaking services, 12.80% were dissatisfied with them and 6.40% had no such service. Participating students reported (see table 3) that their greatest service needs were related to support for study abroad ($PNI_{modified}$=0.52), tutoring ($PNI_{modified}$=0.35), and participation in the development of written policies and any guidelines for DSS ($PNI_{modified}$= 0.27).

Table 3   Mean, Standard Deviation (SD), and Modified Priority Needs Index ($PNI_{Modified}$) of Students with Disabilities' Reported Satisfaction with and Needs for DSS Office Services

Services	Satisfaction		Needs		$PNI_{modified}$	Order
	M	SD	M	SD		
Support for study abroad	2.86	1.70	4.35	1.05	0.52	1
Tutoring	2.95	1.58	3.98	1.22	0.35	2
Participation in the development of written policies and guidelines for DSS at the university	3.21	1.34	4.09	0.94	0.27	3
Participation in the development of guidelines for study and services on campus	3.23	1.49	4.04	1.14	0.25	4
Communication skills	3.20	1.48	3.97	1.23	0.24	5

Satisfaction

Students with disabilities were neither satisfied nor dissatisfied. (*M*=3.47, *SD*=1.27)

The highest satisfaction score of students with disabilities were Disability-specific scholarships. (*M*=4.11, *SD*=1.15)

The lowest satisfaction score of students with disabilities were Support for study abroad. (*M*=2.86, *SD*=1.70)

Need

Students with disabilities were satisfied. (*M*=4.08, *SD*=1.10)

The highest need score of students with disabilities were Disability-specific scholarships. (*M*=4.54, *SD*=0.89)

The lowest need score of students with disabilities were Interpreter services/transliterators services. (*M*=3.30, *SD*=1.60)

Discussion

The findings of this study demonstrate that universities vary in terms of how they organize the administration of DSS. The majority of DSS offices in this study are hosted in student affairs department which is recommended in the 2004 AHEAD survey report (Harbour, 2009). The decision to locate DSS offices within student affairs departments may be related to the notion that student affairs staff are better positioned than academic affairs staff to develop a holistic approach to accommodations

and the development of students with disabilities (Frank & Wade, 1993). Caple (1994) also indicated that this approach might reflect institutional attitudes toward students with disabilities since student affair has been built on helping or taking care students (as cited in Harbour, 2009). However, it is important to notice that there is a difference between Thai universities and those of other countries. Some Thai universities that provide special education programs host the DSS office under the supervision of the faculty of education, this is usually because DSS offices must organize meetings with lecturers who teach students with disabilities more regularly (Suonsed & Changpinit, 2016) and establish a relationship of ongoing communication with faculty (DeeLee, 2015). Perhaps faculty members in special education programs have a better understanding of the needs of students with disabilities than university administrators and may therefore be more able to coordinate with other instructors. DSS offices provide common services for both devices and human resources. Although universities generally provide equipment and assistive technology, the service provider reported the greatest needs were in supporting personnel, equipment, and devices. Harbour (2009) found that DSS offices in student affairs had an average of 8 staff members, which is different from Thai universities where there are approximately 3 staff members in each DSS office. The study of supporting students with disabilities in Rajabhat University also found that although DSS offices have a potential competence in service delivery, the insufficient number of personnel and a high turnover rate often become barriers in handling the services (Daengsuwan, K., Bunyapitak, S., & Kemakunasai, P., 2012). We are unable to say the proper number of service provider per office because it depends on the number of supported student and workload of service provider that need more study in details.

Although there were more students with hearing loss than students with visual impairment in universities, sign language interpreting, an essential support service for students with hearing loss is not adequately provided. Moreover, hiring a sign language interpreter as a full-time or part-time university staff member might be more costly than other services. According to Duffy and Gugerty (2005), the University of Wisconsin's expenses for interpreting/captioning for 58 students who were in the 2002-2003 fiscal year was about 75% of the total cost for services. However, the support services that can assist mainstream students with hearing loss to study are note takers and printed or electronic copies of the text that records what was said in class (Elliot et al., 2002; Kierwa et al., 1991; Stinson, Elliot, Kelly & Liu, 2009). In this study, notetaking services were provided only by 25.81% of 31 universities and service providers seem aware of the need of notetaking services but some students are dissatisfied with the notetaking services. In most Thai universities, sign language interpreters also work as tutors and note takers (audio recordings of lectures are transcribed) for students with hearing loss. These responsibilities may differ from the roles and functions of professional sign language interpreters in other countries.

Budgets have a considerable effect on postsecondary disability support services (Tamara & Kristen, 1997; Christ, 2008). The funding/resources barrier relates not only to a lack of money but also to a lack of understanding of how funding systems operate and from which sources funds may be obtained (Sopko, 2010). In this study, funding support is also an issue for administrators as the findings show that 44.40% of service providers were satisfied with the allocation of budget from the Office of Higher Education while 13.9% of those are dissatisfied and service providers also mentioned the need to consider the allocation of budget for administration DSS offices. Participants urged that financial support system which is effective to allocate in time benefit to provide equipment and activities as the plan. Service providers who participated would prefer to have more support staff to work with students with disabilities, higher budgets to arrange necessary services, and physical environment accommodations on campus. Disability support providers should not be thought of as an unwanted institutional expense but rather as valuable employees who promote academic success (Duffy & Gugerty, 2005).

Thai universities provide accessible restrooms and ramps for students with disabilities in DSS offices and in a few buildings, but students with disabilities still cannot walk around campus or participate in activities on campus independently. This situation affects the quality of services and students' access to academic activities. Ferren and Stanton (2004) indicated that DSS offices are often on facilities across campus and that there are concerns about access issues and academic needs in all colleges and units (as cited in Harbour, 2009). Moreover, the results of this study suggest that instructors generally do not understand the learning style of students with disabilities or how to teach and assess these students. This finding is consistent with the results of a study of students with disabilities in Virginia public and private institutions, which found that the most frequently reported barrier to students' access was that instructors and professors were insensitive or uninformed about students with disabilities (West, Kregel, Getzel, Zhu, Ipsen, & Maarh, 1993).

In response to the trend toward globalization in the 21st century, Thai universities have also begun offering scholarships for students to participate in both short and long-term opportunities to study abroad. Although universities do not prevent students with disabilities from applying for these scholarships, there is little evidence that students with disabilities ever receive scholarships to study aboard. Both service providers and students reported a great need for supporting access to opportunities to study abroad, like the exchange programs available to general students. However, supporting students with disabilities to study abroad requires a collaborative approach that areas of expertise might be education-abroad office, disability service office, financial aid office, academic advising offices, and counseling and health services (Soneson & Fisher, 2011).

Students with disabilities were satisfied with the support that DSS offices provided

them to gain access to information related to scholarships, registration, and coordination with other educational services. In a study conducted by Abreu, Hillier, Frye, and Goldstein (2016), students with disabilities receiving services from DSS offices at their universities suggested having more communication between students, faculty, and DSS providers, expanding locations/hours/availability of offices and staff, and increased awareness of available services to improve delivery services. We found that students with disabilities and service providers agree that the types of assistance most needed by students with disabilities are those that promote student learning, such as tutoring and support for developing learning skills and living skills. The need for support related to student learning may be associated with self-determined behaviors, the lack of transition plans at the secondary level and the lower level of basic academic preparation among students with disabilities.

Service providers and students with disabilities felt similarly that a training program for service providers and faculty is necessary. The study of the opinions of disability service directors on faculty training found the training programs should include information about specific disabilities, and their implications on learning, designing accommodations for students, implementation of accommodations in the classroom, use of appropriate disability language, assistive technology, information about available resources presented with real-life examples, case studies, student and faculty success stories, and case law (Salzberg, et al., 2002). Moreover, the study of supporting students with disabilities

at Rajabhat Uuniversity revealed that these students wanted support from teachers such as access to the content, encouragement to learn, and motivation to achieve goals (Daengsuwan & Boonyaphitak, 2012).

Results of this study show that for administration of DSS offices in Thai universities, it didn't really matter whether the DSS office was under Faculty of Education or not. Independent DSS offices and DSS offices under Faculties of Education both provided similar services and support for disabled students. DSS offices provide accommodation, funding, and consulting for students with disabilities who ask for the services. It seems that Thai DSS offices serve as one-stop centers. The service provisions are delivered when the students with disabilities request them and their staff assist them in line with reasonable support policies from each university which employ a reactive approach rather than a proactive approach. Therefore, responsibilities of disability support services may be divided into 4 levels: university, faculty, DSS office, and students. University should comply with The Persons with Disabilities Education Act and announce clearly non-discrimination policies, including provide reasonable accommodation on campus. Faculty should work with DSS office and adjust method for teaching and evaluation when need to accommodate the students' needs. DSS office should work collaboratively with faculty, staff, and students to identify the needs and reasonable accommodation as appropriate for each student with disabilities as well as transition plan. Students should express determination, cooperate with DSS

office to obtain services and develop appropriate reasonable accommodations. Future studies should consider university policies and crucial services that affect the success of students with disabilities.

Acknowledgement

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