Towards Inclusive Education for Special Need Students in Higher Education from the Perspective of Faculty Members:
A Systematic Literature Review

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Abstract: Special need individuals’ participation in various sectors including education has gained full attention and support from the government. However, they remain underrepresented in getting access to tertiary education. Higher education is committed in providing inclusive campus environment for special need students. Currently, there are several issues faced by higher education administration in providing inclusive campus. Studies that systematically review the literature on issues and challenge in providing inclusive campus for special need students (SNS) remain insufficient. Hence, this article intends to present a systematic literature review on the challenges in creating inclusive campus environment among higher education administrators. The review was based on the publication standard, namely ROSES (RepOrting standards for Systematic Evidence Syntheses). Two leading databases of Scopus and Web of Science, and five supporting databases were selected. Based on the thematic analysis, this review has four main themes namely 1) special need student; 2) inclusive campus; 3) challenges; 4) faculty member. The study offered several significant contributions for practical purposes. Findings from this review offer an insight for the higher education administrator to strategize in creating an inclusive campus for the SNS. To be more certain, future studies on SNS inclusively especially in Malaysia context are recommended.

Keywords: Higher Education, Inclusive environment, Special need student

1. Introduction

Ministry of Education has launched Inclusive OKU or Disability Inclusion Policy in November 2018. The guideline has been distributed to all 20 Public Higher Education Institutions in Malaysia. This effort is in line with the policy that has been enacted by the government. Zero reject policy is important to ensure the involvement of special need students (SNS) to access education (Chin, 2020). To ensure that more SNS are able to participate in tertiary education, the guideline has also been emphasized for the Malaysian Public Higher Education Institution to set up Disability Support Office separately with welfare unit. It is important to serve special support services to students and staff with special need in the institution. Previous research has received feedback and insight on the challenges faced by faculty members in preparing an inclusive environment for SNS.
SNS have different types of impairment, which require different approaches, facilities and support. They need to be properly managed to ensure their success rate in accessing tertiary education. Increasing the number of SNS who have successfully completed their primary and secondary school could drive them to strive in gaining better qualification. Higher education and faculty members need to be proactive in preparing inclusive education and provide better support services. To gain insight into the issue, this paper aims to gain a clear insight on the challenges faced in preparing inclusive education for SNS based on the faculty member’s perspective. This paper will also conclude the best practice and actions that can be considered to ensure success in setting inclusive education and disability support offices as suggested by past scholars.

1.1 Overview of existing studies related to challenges faced by faculty member

Malaysia Public Higher Education (PHE) has been given the mandate to provide a better education for special needs students (SNS) including the Disability Support Office. Malaysia Public Higher Education is encouraged to provide a disability support office and inclusive campus environment by 2025. The government is committed to encouraging student affairs administration to take steps and ensure SNS have full access to education, especially in tertiary education. It is a new role and responsibility for Malaysian PHE to provide the best facilities for the SNS. However, there are issues and challenges among higher education administrators to cater for inclusive education. Previous studies conducted focused on faculty member’s perspectives including analysing the attitudes of faculty members toward the SNS, the needs for training for faculty members and the importance of universal learning design (Moriña, 2017). Some of the faculty members claimed that they need trainings to deal with the new roles and responsibilities especially in implementing an inclusive environment (Black et al., 2014; Debrand & Salzberg, 2005; Lister et al., 2020). One study found that several faculties were not aware of the legislation on disability and inclusive campus (Hong & Himmel, 2009) while other studies showed that faculty has positive attitudes and willingness in implementing inclusive education but lack of action has been taken (Cook et al., 2009; Lombardi & Murray, 2011). In some cases, there were faculty unprepared to work with the special need students (Love et al., 2015).

Special need students have been successful in gaining admission to higher education after completing secondary school. Local universities and colleges, on the other hand, must cater to the specific needs of students with disabilities (Serajul Haq, 2007). However, different types of disability would require different types of services. For examples, students with learning disability may have an issue relating to information management, have low level of self-efficacy and lack of self-confident (Fazlinda et al., 2019) and thus, they need to be treated accordingly. Some higher education institutions have set up a welfare unit for SNS which is managed by the student affairs office. However, this unit is also responsible for providing welfare to other students too. The student with special needs is varied compared to their peers; hence, there is a need for a specially designated unit to cater with the varied requirement. The existence of disability support office could help SNS to access higher education successfully (Moriña et al., 2017). Previous studies have shown that some institutions have not considered the special need students because of accessibility issues (Baron et al., 1996; Hadjikakou et al., 2010). Each campus needs to provide disability support office to fully concentrate on serving the needs and providing the support needed by special need students (Yusof et al., 2020). In helping Malaysian Public Higher Education Institutions to respond towards the government's call for preparing inclusive environment, facilities and support for SNS, the findings gathered from previous studies could offer better understanding on the challenges arise among faculty members and disability support service staff.

2. Methodology

2.1 The review protocol - ROSES

The study was guided by RepOrting standards for Systematic Evidence Syntheses or ROSES. ROSES are designed specifically for systematic review (Haddaway et al., 2018). ROSES aims to foster the researchers to ensure they gather the right information. The appropriate research question has been formulated by referring the review protocol. Adapted review protocol has been used as there is a few
improvements need to be done in drafting the abstract section. Three main sub-processes are applied including identification, screening and eligibility to describe the systematic searching strategies. The flow of strategy in selecting the right article is also explained by the authors.

2.2 Formulation of research questions

To formulate the research question for this study, PICo tool was selected. PICo is a tool that assists authors to develop suitable research question for the review (Shaffril et al., 2020). Three main concepts are explained through PICo which are Population or Problem, Interest and Context. The authors have identified the concept in developing research question which included special need student (Population), challenge in preparing inclusive campus (Interest) and Higher education (Context). Thus, the main research question for this systematic review is “What are the issues and challenges faced by faculty members in preparing inclusive campus?”

2.3 Systematic searching strategies

Three main sub-process have been conducted by the authors to retrieve the related articles including identification, screening, and eligibility.

2.3.1 Identification

Identification is a process to search for all synonyms, related terms, and variations of keywords for the study. The authors have identified several related terms including special need students, student with special educational needs, higher education tertiary education or and inclusive education. More related articles can be retrieved by applying the variation keywords. Related keywords are determined by screening past studies, suggested keywords by Scopus, and keywords suggested by experts (Table 1). The searching process was run on the leading database by using an advanced searching technique. In the advanced searching technique, several searching strings have been used including truncation, wild card, and field code functions (Table 2).

Table 1: Enriched Keyword

<table>
<thead>
<tr>
<th>Section</th>
<th>Main Keywords</th>
<th>Enriched Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Towards Inclusive Education for Special Need Students in Higher Education from the Perspective of Faculty Members</td>
<td>1. Special Need Students</td>
<td>Student with special educational need=Special need students, students with disability, disabled students, SWD, SEN, SNS</td>
</tr>
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</table>

Table 2: Search String

<table>
<thead>
<tr>
<th>Database</th>
<th>Search string</th>
</tr>
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<tbody>
<tr>
<td>Scopus</td>
<td>TITLE-ABS-KEY (&quot;special education need&quot; OR &quot;special need students&quot; OR &quot;disable students&quot; OR &quot;student with disabilities&quot; OR &quot;SEN&quot; OR &quot;PWD&quot; OR &quot;people with disabilities&quot;) AND (&quot;higher education&quot; OR &quot;tertiary education&quot;) AND (&quot;challenge&quot; OR &quot;barriers&quot;)</td>
</tr>
<tr>
<td>Web of Science</td>
<td>TS = (&quot;special education need&quot; OR &quot;special need students&quot; OR &quot;disable students&quot; OR &quot;student with disabilities&quot; OR &quot;SEN&quot; OR &quot;PWD&quot; OR &quot;people with disabilities&quot;) AND (&quot;challenge&quot; OR &quot;barriers&quot;) AND (&quot;higher education&quot; OR &quot;tertiary education&quot;)</td>
</tr>
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</table>
Manual searching techniques such as handpicking and snowballing were also applied. To search the related articles and documents for the review, two leading databases were selected, which included Scopus and Web of Science. Both of the databases were identified as leading databases as they could perform better article searching as suggested by Gusenbauer (2019). The selected databases offer several advantages such as the availability of advance searching functions, comprehensive (indexing more than 5000 publishers), and have the capability to control the article’s quality with multidisciplinary focus, including environment management related studies (Gusenbauer, 2019; Martín-Martín et al., 2018).

A total of five sources were used as supporting databases. The selected sources of Google Scholar, ERIC, Research Gate, Tailor & Francis, and University/agencies library (for printed document) were also included as the leading databases; making the overall total of the leading databases used in the searching process as five. These databases are mostly needed to gain additional sources such as non-indexing journals and any missing articles from the leading databases. Supporting databases are needed as Xiao and Watson (2019) claimed that no database is perfect while Bates et al. (2017) concluded that the sensitivity of the database on the keywords developed for searching the related articles is not reaching 100%. The selected supporting databases have their own advantage. Google Scholar, for example, can produce enormous results. In a study conducted by Gusenbauer (2019), it has been concluded that almost 389 million documents were available in the Google Scholar database while Martin-Martin et al. (2017) concluded that there were 165 million articles journals available in Google Scholar. The searching process in the leading and supporting databases have resulted in a total of 384 articles. Additionally, to search for any related printed journals/documents, the university/agency library was visited.

2.3.2 Screening

This study screened all 384 items by selecting the selection criterions that were automatically carried out on the basis of the sorting function available in the databases selected. The same criteria were used across the selected databases and whenever the sorting functions were not available, the articles were excluded manually. According to Okoli (2015), the researchers should set the range of periods that can be reviewed as it is almost impossible for the researchers to review all the existing published articles. Higgins et al. (2021), on the other hand, stated that restriction on timeline publication should be activated on related studies as it could assist the researcher to identify what have been reported within a specific period of time. Based on the searching process, it was identified that the number of studies related to special need students (SNS) has multiplied starting from 1993. The suggested timeline to review article was between five years; however, the number of articles retrieved was less. Hence, the author extended the timeline range which was between 2005 and 2020 as one of the inclusion criteria. Furthermore, only articles with empirical data and published in journal, book or chapter in the book were included in screening process to ensure the quality of the review. Moreover, only articles published in English were incorporated. It is crucial in the review to avoid confusion in understanding. This process excluded 345 articles as they did not fit the inclusion criteria while the remaining 39 articles were used for the eligibility process.

2.3.3 Eligibility

The authors manually monitored the remaining articles in eligibility process. It is crucial to ensure all the remaining articles are in line with the criteria. This process was performed by reading the title and abstract of the articles and if there was still no clear understanding gained on the relevance of the selected articles of the study, the article’s content was examined. This process excluded review papers, duplicate records between databases, and selected articles with objectives not focusing on faculty members and higher education administrators. Overall, there were 17 articles selected and reviewed.
Fig. 1 The flow diagram (adapted from Shaffril et al., 2019)
3. Findings and Discussion

The need and requirement voiced up by the faculty members and higher education administrators should be considered and given support by the authority. The support given could help higher education administrator to strive towards achieving inclusive education and better serve the special need students (SNS). This could specifically apply for Public Higher Education in Malaysia in achieving inclusive education by 2025 and in line with the zero-reject policy that has been introduced by the Ministry of Education Malaysia (Chin, 2020). According to Moriña (2017), three main findings have been identified from faculty voice and perspective including faculty need for training, the improvement in inclusive education setting, attitudes of the faculty members towards SNS and implementing towards universal design for learning strategies. Since the type of disability is varied, the need for specific training for faculty members has been identified as a crucial need among them in dealing with special need students (Black et al., 2014; Debrand & Salzberg, 2005; Lister et al., 2020; Love et al., 2015). Challenges remain to exist when the faculty members are not ready, incapable to understand, react and aware of the student situation and needs. With adequate training, the faculty members could identify the opportunity to improve their service to the SNS during their studies such as the need for a college closer to the classroom for the wheelchair users and universal design classroom for visual and hearing-impaired students. To cater with the SNS need, an innovative and adaptive approach can also be implemented; for example, using gamification in learning application (Fadhlina Izzah et al., 2019). Active communication from faculty members could also increase SNS participation in faculty programs; thus, increase the student’s visibility in the institutions. It has also been identified that some faculty members are welcoming the SNS; however, some of the faculty members face difficulty to serve the student with proper approach if the need for training is not set as priority. The faculty's capability to communicate and manage the SNS could help the student to shout out their needs and it helps the faculty to allocate fund and draft strategy to improve faculty accommodation.

The second challenge identified is the faculty attitude towards SNS. Positive attitudes toward SNS would create an inclusive campus environment for the students. More awareness programs should be organized to minimize the gap among faculty towards special need student and their non-disabled peers. All students should be treated fairly and be given the same opportunity regardless of their disability. The Ministry of Education Malaysia (MoE) has launched the inclusive policy in which 20 Malaysia Public Higher Education Institutions are pleased to receive the guideline. However, according to Yusof et al. (2020), Malaysian higher education administrators faced limitations in securing fund to provide facilities that fulfil the standard of an inclusive campus such as a wheelchair-friendly building and impairment-friendly equipment which leads to a slowdown in developing the inclusive environment. This consequently reduced the number of intakes for each academic year as the faculties are not capable to provide proper facilities required.

The third challenge that has been identified is the implementation of Universal Design (UD) and Universal Design for Learning (UDL) in classrooms (Black et al., 2014; Cook et al., 2009; Hitch et al., 2015; Lombardi & Murray, 2011). UDL is identified to be able to remove barriers in the learning process; for example, building flexibility that can be adjusted especially for SNS. A huge amount of fund, capability of faculty staff and technology scarcity led to fewer number of faculty that implements UD and UDL in the faculty and classrooms. Another challenge that has also been identified from the past studies included the lack of knowledge related to the law of disability among faculty members (Cook et al., 2009; Debrand & Salzberg, 2005; Hong & Himmel, 2009). Other findings on issues and challenges from the faculty members and higher education administrator perspective are presented in Table 3.
### Table 3: Finding issue and challenges arise from the faculty members

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Findings</th>
</tr>
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<tbody>
<tr>
<td>Debrand and Salzberg</td>
<td>2005</td>
<td>Limited time available for faculty training, faculty were not well informed about the accommodation process with the law concerning students with disabilities</td>
</tr>
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</table>
| Cook et al.                  | 2009     | Three main findings have been seen as crucial but were not implemented satisfactorily which included  
|                              |          | i. accommodation policies and disability etiquette  
|                              |          | ii. issues related to law, Universal Design for Instruction, and disability characteristics  
<p>|                              |          | iii. issues related to the willingness among higher education administrators to provide accommodations |
| Hong and Himmel              | 2009     | Faculty was identified to have lack of specific knowledge about disability legislation |
| Zhang et al.                 | 2010     | Disability support offices have performed an adequate job in disseminating information to the faculty in this study. However, there is still room for improvement when it comes to knowledge regarding legal responsibilities |
| Lombardi and Murray          | 2011     | Faculty attitudes and perceptions toward disability and their willingness to accommodate and adopt Universal Design principles can be reliably assessed |
| Coriale et al.               | 2012     | Emphasizes the need to change in the social institutions especially in terms of productivity and efficiency to conduct critical service and deconstructs disability |
| Black et al.                 | 2014     | Some faculties were incorporating UDI/UDL principles into their instruction, the methods used varied, and faculty attitudes continued to create barriers to an equitable educational environment for SNS. More education and training in working with students with disabilities, as well as adapting teaching methods for these students using UDI/UDL, are required. |
| Hitch et al.                 | 2015     | Limited number of Australian universities have referred to inclusive teaching or UDL in their policies and procedures. |
| Lombardi et al.              | 2015     | US higher education shows the highest score in attitudes and actions for implementing inclusive education. Canadian higher education shows more positive endorsement. However, Spain and US show greater inconsistencies between positive endorsement but lack of implementation towards inclusive education. |
| Love et al.                  | 2015     | Higher education STEM faculty were identified are often unprepared for working with SNS. |
| Moriña et al.                | 2017     | Disability support office is a key element for the access and retention of SNS in the university and the successful completion of their studies |
| Fossey et al.                | 2017     | The findings imply that disability services must shift away from a focus on care and concern and toward a focus on rights, as well as foster students’ self-advocacy skills to better enable them to negotiate without disadvantage. |
| Lopez-Gavira et al.          | 2019     | The findings revealed several critical aspects in facilitating inclusive education: the positive attitude of faculty members toward SNS, promotes inclusive education, the need to make reasonable adjustments including methodologies, evaluation systems, and |</p>
<table>
<thead>
<tr>
<th>Authors (Year)</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yusof et al. (2020)</td>
<td>resources to ensure the learning of SNS and the use of technology to facilitate access to learning. The study revealed limitations among the administrators in securing funding. This relates to slow development in building inclusive campuses, as participants reported a lack of disabled-friendly facilities and infrastructure</td>
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<tr>
<td>Corrêa et al. (2019)</td>
<td>Most of the participants were adequately informed about people with special need and the core elements identified as accessibility</td>
</tr>
<tr>
<td>Lister et al. (2020)</td>
<td>The findings indicated that there were strong positive attitudes toward inclusive practice. A requirement on training among staff has also been identified to successfully assist SNS in higher education.</td>
</tr>
<tr>
<td>Sandoval et al. (2020)</td>
<td>There was a lack of knowledge among higher education administrators on the needs of the students; thus, it led to doubt feelings in handling the SNS.</td>
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Over the year, the research on inclusive campus and special need students are increased. It has been identified that, higher education administrators are committed to provide an inclusive campus for special need students, however, several improvements can be conducted from higher education administrators in providing an inclusive campus for special need students (Zhang et al., 2010) including in emphasizing toward efficiency and productivity to provide service for special need students (Coriale et al., 2012). The lack of knowledge about disability (Sandoval et al., 2020) also could lead to mishandling special need students and lack of implementation of an inclusive campus as the higher education administrator are not aware type of support and facilities required by special need students (Lombardi et al., 2015). The positive attitude among higher education administrators could lead to a progressive action and adjustment made to ensure special need students could access the institution (Corrêa et al., 2019; Fossey et al., 2017; Lopez-Gavira et al., 2019). From the findings, it could be identified that the knowledge and positive attitudes among higher education administrators could drive them to give the best support and adjustment to provide inclusive campus for special need students.

4. Conclusion

Currently, Malaysian Public Higher Education Institution is showing a progressive action to ensure special need students (SNS) are able to participate in higher education to improve their skill and knowledge. Most of the public higher educations have set up their own disability support office to assist each SNS during their study. However, some improvements should be taken into consideration to secure all SNS’ success in tertiary education. Past study has identified some rooms for improvement in assisting higher education toward inclusive campus. The improvement that can be considered included improving the policies, strategies, processes and actions to assist higher education towards inclusive education. Based on the review, several suggestions can be highlighted. First, the authority should consider allocating funding to higher education institutions to support the implementation of universal design, universal design for learning and disable-friendly building. The fund can also be allocated for the purpose of providing scholarships for special needs student to support them during the study (Chiwandire & Vincent, 2019). Second, the training for the faculty should be set as a priority to prepare the faculty members in handling and assist SNS. Third, collaboration among public higher education with an international university to provide standardized support and continuous communication especially in identifying the best approach can be implemented by higher education in Malaysia to better assist SNS. Next, conducting more research for each stakeholder especially in Malaysia including SNS, faculty, parents, Ministry of Higher Education and Ministry of Education in improving special need student’s facilities and support. Finally, field study is recommended to be performed to gain in-depth understanding on the issues and challenges faced by Malaysia higher education administrator in
providing the best service to the SNS in order to ensure the achievement of inclusive education policy. Qualitative or Mixed method research can be performed in future since this area is still understudied.

5. Co-Author Contribution

The authors affirmed that there is no conflict of interest in this article. Author 1 carried out the fieldwork and review the literature while Author 2 strategized on the writing and structure of the review.

6. Acknowledgements

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7. References


