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Prioritising Content to Enhance Preservice teachers' Preparedness for Inclusive Education: Implications for Online Learning

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Abstract

This paper presents survey findings of preservice (n = 128) and experienced teachers (n = 326) about enhancing the preparation of preservice teachers to include students with disabilities in regular classes during initial teacher education. Non-parametric statistics were used to analyse the data. When asked to rank their preferred mode of learning, preservice teachers ranked online learning last. Results identified topics to prioritise during initial teacher education. Implications in regard to online delivery of inclusive content are discussed. Given that the recent pandemic resulted in a sudden shift to online learning, these findings may add to the body of knowledge about preparing preservice teachers for inclusive teaching.

Keywords: Inclusive education, teacher education, preservice teachers, quantitative, online

Introduction

Over the last decade, universities have increasingly delivered courses either as blended and/or online learning (König et al., 2020; Scull et al., 2020; Shand & Farrelly, 2018). The COVID-19 pandemic accelerated this movement towards online learning meaning, that teacher educators had to rapidly adapt to delivering courses fully online (Allen et al., 2020; Moorhouse, 2020; Scull et al., 2020). Online course development may be the result of rapid decision making, rather than being informed by evidence-based pedagogy. It seems likely that universities will continue to deliver some courses online, making online delivery even more common practice as we move into the future (Allen et al., 2020).

This study examined preservice and experienced teachers' beliefs about enhancing preservice teachers' preparedness for inclusive teaching. This paper aims to address the question: What content should be prioritised to enhance the preparation of preservice teachers during initial teacher education for inclusive teaching? Given the shift to online delivery, implications for online learning are discussed. Investigating preservice and experienced teachers' views about enhancing preservice teachers' preparedness specifically in the areas of attitudes, knowledge, and skills will add to the body of research to better prepare preservice teachers for their inclusive role.

The focus of this study was about including children with disabilities. The philosophy and practice of inclusive education is rooted in social justice and is based on the view that all children have the right to take their place and be educated in regular classes (Ballard, 2012; Florian & Camedda, 2020; Loreman et al., 2011; Naraian, 2017).

A plethora of research exists suggesting that initial teacher education is not adequately preparing preservice teachers for teaching in contemporary inclusive classes (Chitiyo et al., 2019; Cochran-Smith et al., 2016; Pinter et al., 2020). Further, research suggests that initial teacher education is wanting in the delivery of online learning (König et al., 2020) and is deficient in meeting the information communication technology (ICT) needs required of teachers in contemporary schools (König et al., 2020). These combined issues make the effectiveness of initial teacher education to adequately prepare preservice teachers for inclusive teaching worrying.

Teacher Preparedness for Inclusive Teaching

Recent studies from across the world show teachers feel ill-prepared and ill-equipped for inclusive teaching (Chitiyo et al., 2019; Cochran-Smith et al., 2016; Parliament of

Australia, 2016; Pinter et al., 2020). Teachers report having insufficient knowledge and expertise to cater for classes of students with diverse learning needs (Chitiyo et al., 2019; Kurth & Foley, 2014; Parliament of NSW, 2010). This is despite the existence of legislation such as the Disability Discrimination Act 1992 and Disability Standards for Education 2005 in Australia which supports the inclusive framework (Graham & Sweller, 2011) as well as a plethora of research undertaken about better preparing preservice teachers for inclusive teaching.

Earlier research has tended to examine the attitudes of preservice and experienced teachers (e.g., Ismailos et al., 2019; Sharma & Sokal, 2015). This paper, however, identifies content in the areas of attitudes, knowledge, and skills to effectively prepare preservice teachers during initial teacher education. The findings are discussed in light of selecting content to prepare preservice teachers in an online context.

Delivering Online Courses

In this article, online education is defined as "one in which at least 80% of the course content is delivered online" (Allen et al., 2016, p. 7). In this type of education,communication between teachers and students and interaction with course content is via internet-based technologies (Bolliger & Wasilik, 2009).

Various studies highlight concerns about online course design and delivery. Downing and Dyment (2013) surveyed 27 teacher educators from a mid-sized Australian university about their preparedness to teach online. They found that the majority of participants were uncomfortable with online teaching, citing concerns such as their technological competency and insufficient personal contact with students. Indeed, they found that many teacher educators query the appropriateness of online delivery for preparing preservice teachers for their future roles. In particular, they question whether online delivery facilitates the development of dispositions and characteristics required of a competent teacher, and query the effectiveness of online delivery to successfully engage students.

In a study carried out in Germany, König et al. (2020) found that, contrary to expectations, beginning teachers did not have sophisticated digital skills. As a result, they concluded that initial teacher education needs to ensure that preservice teachers are provided with appropriately designed learning opportunities that lead to the acquisition of necessary digital competencies.

Researchers have identified effective online approaches that can be adopted by teacher educators who intend to make their teaching effective, including in inclusive instructional settings. For example, Shand and Farrelly (2018) recommended that teacher

educators should not only consider the materials and resources that they present, but also organisational aspects of the teaching/learning environment such as convenience and access. Downing et al. (2019) provided examples of effective and desirable online approaches, such as simulations, interactive webinars, student-led discussion forums, collaborative activities, and practical experiences. They concluded that academics value the support of online education designers during transitions to online delivery. However, the pandemic has meant that many universities moved rapidly to online learning, possibly resulting in a haphazard adoption of online teaching approaches.

Dyment and Downing (2019) found that most research about online learning is published outside teacher education journals. Although examples of "best practice" are available, they concluded that ad-hoc dissemination of research may mean that teacher educators have difficulty ascertaining practice implications. They recommended further research be undertaken to understand how face-to-face approaches can be taught online and to establish if and how online learning impacts preservice teachers' work. Numerous researchers recommend applying evidence-based findings about effectively using ICT in teacher education to guide future research practice policy (Australian Institute for Teaching and School Leadership (AITSL, 2018); Dyment & Downing, 2019). Some researchers advise that preservice teachers require authentic online learning experiences, for example, learning experiences connected to their future roles (la Velle et al., 2020; Luo et al., 2017). However, generally researchers do not provide detail about content nor specify how to achieve this goal. In a report about online delivery of initial teacher education, the Australian Institute for Teaching and School Leadership (2018) referred to positive aspects of online learning, such as diversifying the teaching workforce and providing access to cohorts who cannot access on-campus programs (e.g., work commitments, living in regional areas). However, the report did not pinpoint what constitutes best practice.

Study Purpose

Although research about online learning during initial teacher education is mounting, there appears to be a gap in the literature about preparing preservice teachers for including students with disabilities in the online space. This research presents quantitative findings for prioritising content to prepare preservice teachers for inclusive teaching. Implications for delivery of online content to prepare preservice teachers for inclusive teaching during initial education are discussed.

The study sought to achieve the following key objectives:

1. Determine preservice teachers' preferred mode of delivery for inclusive education

content; and

2. Establish curriculum priorities in the areas of attitudes, knowledge and skills.

Method and Procedure

The research presented here formed part of a larger study. Ethics approval was granted by the university and education systems where this research was conducted. All participants were informed that participation in all aspects of the research was voluntary. Identities of participants were concealed.

Participants

In this study, preservice teachers (n = 128) were postgraduate students enrolled in a Master of Teaching program in an initial primary teacher education course in a New South Wales (NSW) university (as preparation to teach children aged approximately 5 to 12 years old). As part of this degree, preservice teachers are required to undertake a mandatory one semester unit in inclusive education to prepare them to cater for the diversity of learners in contemporary regular classes. This unit in inclusive education is routinely undertaken in the final semester of study of the Master of Teaching – Primary course. The Master of Teaching – Primary is a professional teaching qualification for tertiary students possessing an appropriate bachelor degree. The standard time to complete the course was 1.5 years full-time to 2 years full-time or the equivalent completed either part-time or accelerated mode. The unit was presented as mixed mode delivery or blended learning; that is, face-to-face and online. The course is accredited with NSW Education Standards Authority, and preservice teachers are required to meet the Australian Professional Standards for Teachers as set out by AITSL (2012) on graduation.

The term experienced teachers (n=326) refers to primary school personnel comprising executive staff, class teachers, school counsellors and support teachers. The experienced teacher sample comprised primary school personnel drawn from NSW Department of Education schools (n=281) and Catholic schools (n=36) within the Parramatta Diocese (schools in Western Sydney – Springwood to Parramatta). Nine other teachers who worked in non-government schools also responded to the online questionnaire. The majority were female (277/326, 85%) and taught in metropolitan schools (245, 76%). Half were aged over 50 (164, 51%), and just over half had taught for more than 20 years (167, 51%); there were approximately equal numbers of class teachers (109, 33%) and support teachers (106, 33%); 156 (48%) had general primary training (73, 22% – no inclusive unit; 83, 26% with an inclusive unit) and 89 (27%) had postgraduate qualifications in special education or school

counselling. The majority worked in schools in areas that were not socially disadvantaged (169, 52%) while 130 (40%) worked in schools in areas of social disadvantage. The majority (305, 94%) knew a person with a disability or additional need.

Setting

Preservice teachers responded to the survey while on campus in a university setting. School personnel who voluntarily responded to the online survey worked predominately in public government primary schools across the state of NSW, with a small representation from non-government schools. As such, it was important to design a questionnaire suitable for use in a variety of educational settings with a variety of participants.

Tools

Data in this study were collected using questionnaires. The questionnaire was designed to generate responses to identify curriculum and pedagogy that participants consider enhance preservice teachers' preparedness for inclusive teaching. The questionnaire was developed by the researcher and was designed to generate quantitative and open-ended (qualitative) responses. The design and validation of the tool is detailed in the Journal of Education and Culture Studies (ISSN 2573-0401 (Print) ISSN 2573-041X (Online)) and is entitled "Development and initial validation of a questionnaire to improve preparation of preservice teachers for contemporary inclusive teaching". Results of exploratory factor analysis support the questionnaire's construct validity while results using Cronbach's alpha coefficients showed good to very good internal consistency (alpha's ranging from .785 to .914).

The questionnaire needed to serve two purposes; firstly, to compare preservice with experienced teachers on their perceptions regarding their general preparedness, and their attitudes, knowledge, and skills for inclusive teaching; and secondly, to identify content that preservice and experienced teachers believe should be covered during initial teacher education to prepare preservice teachers for inclusive teaching. This research also involved the delivery of an inclusive education unit as a study intervention, and the questionnaire was used to evaluate changes in self-reported attitudes, knowledge, and skills of preservice teachers after undertaking the inclusive unit. The data collected enabled the researcher to compare the responses of preservice teachers with experienced teachers, noting differences and similarities that could inform future practice.

One section of the questionnaire comprised topics about Attitudes, Knowledge, and Skills. The Attitudes and Knowledge areas comprised four topics each. The Skills area comprised 20 topics divided across four categories, including Classroom Management,

Collaboration, Differentiation, and Resource Use. The Differentiation category was further divided into two sub-categories: *skills to cater to a diversity of learners* and *general practices for inclusive teaching*. This avoided possible cognitive overload in participants who were required to rank more than five topics. Each of the Differentiation sub-categories contained a distractor topic which supported the questionnaire's "construct validity".

Data Collection Procedures

The questionnaire was designed for both online and hard-copy presentation to optimise response rates in the different settings (Dillman et al., 2014). Preservice teachers responded to the questionnaire before and after completing an on-campus mandatory inclusive education unit (pre- and post-unit matched data; n=119; unmatched data; n = 128) while experienced teachers responded only once (n=326). The questionnaire was disseminated in hard-copy to preservice teachers attending the first and last lecture of the inclusive unit. The online survey was distributed using online education communities such as Moodle, a NSW Department of Education platform, and emails to principals and *Department of Education* personnel. Experienced teachers were invited to respond to the online version once only.

Data Analysis

The Statistical Package for the Social Sciences (IBM *SPSS; Version 22*; https://www.ibm.com/analytics/us/en/technology/spss/) was used to analyse the quantitative responses. For both objectives, non-parametric techniques were used to analyse the rank order data, as the data did not meet the assumptions for parametric analyses. These techniques were seen to be ideal for ordinal (ranked) scales (Pallant, 2013) as entailed in the present study. Participants were asked to rank topics. The topics were grouped into categories, in order of most important (1) to least important (4 or 5). These categories were: preferred mode of delivery of inclusive content, and topics viewed as most important for coverage during initial teacher education to prepare preservice teachers for inclusive teaching in the areas of attitudes, knowledge, and skills.

These data were analysed using two approaches. Firstly, data were analysed for level of agreement among raters regarding importance of topics. Secondly, data were analysed to identify significant differences in the rankings. The non-parametric Kendall's coefficient of concordance (Kendall's W) was used to assess participants' agreement of ranking of topics according to importance within categories. The Kendall's W indicates a strength of relationship index (Green & Salkind, 2014); the overall test of the W statistic indicates whether there is significant agreement within a group of raters; the W ranges from 0 (no trend

of agreement) to 1 (complete agreement; Field, 2009). Intermediate values of W indicate a greater or lesser degree of agreement (Siegel & Castellan, 1988).

The score expresses a mean ranking and therefore the lowest score indicates the most important topic (Siegel & Castellan, 1988). If the overall W statistic is significant, it is necessary to run additional post-hoc comparisons to determine which topics within each group are statistically significantly different from one another (Pallant, 2013). Hence, to compare pairs within categories, Wilcoxon Signed Rank Tests, using Bonferroni adjusted alpha values at the .05 level were conducted to determine which differences were significant (Siegel & Castellan, 1988). These data met the required assumptions (i.e., non-normal distribution, measurement on an ordinal scale, and more than 30 in each group yields accurate results; Green & Salkind, 2014) and therefore were suitable for this analysis.

For the rank order questions, the preservice post-unit questionnaire data and the experienced teacher data were analysed. All post-unit questionnaire data were used for rank order analysis, increasing the sample size to 128. Preservice teachers' responses to the post-, rather than the pre-questionnaire, were compared with experienced teachers as, having almost completed their degree, they were regarded as being more informed about inclusive education. It seems reasonable to assume that the combination of results for preservice (post-unit questionnaire) and experienced teachers may usefully help to identify topics for prioritisation to prepare preservice teachers for inclusive teaching.

Critical levels of significance were adjusted using a Bonferroni correction for number of topics and/or number of comparisons where appropriate. In addition, Monte Carlo tests were conducted to account for the considerably large sample size for the experienced teacher group ($n > 300$) (Field, 2009, p. *564*), and in each case, results suggested that significant effects were genuine.

Results

Preferred Mode of Delivery

Preservice teachers were asked to rank their preferred mode of delivering inclusive education content during initial teacher education. There was a moderate level of agreement (Kendall's coefficient W = .60). Tutorials were ranked as significantly more important (χ^2 (3, N = 124) = 222.52, p = .00, *mean rank* = 1.29) than lectures (*mean rank* = 2.34, p = .00), assignments were next (*mean rank* = 2.67, p = .00), and online learning (*mean rank* = 3.70, p = .00) was ranked last.

These results showed that preservice teachers preferred tutorials, followed by lectures, assignment tasks, and finally, their least preferred mode of learning was online. Given that courses about including students with disabilities is increasingly delivered online as a result of decisions by universities and because of the pandemic (Moorhouse, 2020), this finding is of concern.

Curriculum Priorities in the Areas of Attitudes, Knowledge and Skills

The following section presents findings that show the degree of importance that preservice and experienced teachers attributed to particular topics. Preservice and experienced teachers were asked to rank topics within areas (i.e., attitudes, knowledge) and skill categories (i.e., classroom management, collaboration, differentiation, resource use), according to importance to prepare preservice teachers for inclusive teaching. Kendall's W is a measure of agreement among raters. Topics were ranked as most important (1= first) to least important (4 or 5). The ranking of topics by preservice and experienced teachers was examined for statistical significance. Tables of mean rankings for topics are presented in Table 1 and Table 2 for preservice teachers and experienced teachers, respectively. Overall, results showed moderate to strong levels of agreement between preservice and experienced teachers in the ranking of five out of seven topics with regard to importance. Results for preservice teachers are presented first and are based on post-unit questionnaire data.

Ranking of Topics according to Importance for Preparing Preservice Teachers for Inclusive Teaching

Table 1

Importance of Topics as Ranked by Preservice Teachers (Post-unit Questionnaire)

Topics by Category	Mean rank
Attitude	
Develop positive attitudes regarding inclusion	1.83 *
Understand educators role is to adapt to meet the needs of all students	2.06 €
Understand benefits of inclusion	2.39
Examine views about disability	3.71
Knowledge	
Apply syllabus information to students with additional needs	1.76 *
Understand referral processes to gain assistance	2.25
Apply disability legislation	2.53
Know about exam special provisions	3.46
Classroom management	
Develop skills to manage students with challenging behaviours	2.22 *
Develop strategies to teach social skills to students with additional needs	2.82

Manage cooperative learning	2.88
Apply behaviour management theories	3.08
Implement risk assessments for students with challenging behaviours	3.99
Differentiation – ability to cater to the range of student needs	
Adjust and accommodate to cater to students with additional needs	1.53 *
Adopt teaching strategies that cater to different learning styles	2.29
Differentiate the curriculum to cater to the needs of very capable students	2.59
Adopt strategies that ignore the individual differences of students (distractor topic)	3.59
Differentiation – general practices for inclusive teaching	
Use a variety of assessment techniques to determine the learning needs of students	2.27 *
Adapt the physical environment to meet the needs of students with additional needs	2.63
Develop research based strategies that are effective for specific disabilities	2.77
Acquire specific skills e.g., questioning skills, task analysis	2.83
Assess all students using the same methods (distractor topic)	4.50
Resources	
Understand that resources need to be matched to students' learning needs	1.90 *
Develop awareness of technology to assist students with additional needs	2.54
Develop awareness of support personnel	2.55
Evaluate suitability of available resources	3.01
Collaboration	
Develop skills of collaborating with parents/guardians	2.26
Develop individual education plans collaboratively with colleagues	2.54
Develop skills of collaborating with teacher assistants/aides	2.60
Develop skills of collaborating with specialist/support teachers	2.60

Note. The lowest mean rank indicates the most important topic.

* Topic ranked significantly more important than other topic in category, at $p < .001$;

€ The difference in ranking between the most important and this topic did not reach significance.

Table 2

Importance of Topic as Ranked by Experienced Teachers

Topic by Category	Mean rank
Attitude	
Understand educators role is to adapt to meet the needs of all students	1.76 *
Develop positive attitudes regarding inclusion	2.18
Understand benefits of inclusion	2.47
Examine views about disability	3.60
Knowledge	
Apply syllabus information to students with additional needs	1.62 *
Understand referral processes to gain assistance	2.21

Apply disability legislation	2.51
Know about exam special provisions	3.66
Classroom management	
Develop skills to manage students with challenging behaviours	1.90 *
Apply behaviour management theories	2.78
Manage cooperative learning	3.08
Develop strategies to teach social skills to students with additional needs	3.17
Implement risk assessments for students with challenging behaviours	4.07
Collaboration	
Develop individual education plans collaboratively with colleagues	2.03 *
Develop skills of collaborating with parents/guardians	2.13
Develop skills of collaborating with specialist/support teachers	2.79
Develop skills of collaborating with teacher assistants/aides	3.06
Differentiation – ability to cater to the range of student needs	
Adjust and accommodate to cater to students with additional needs	1.57 *
Adopt teaching strategies that cater to different learning styles	2.13
Differentiate the curriculum to cater to the needs of very capable students	2.44
Adopt strategies that ignore the individual differences of students (distractor topic)	3.86
Differentiation – general practices for inclusive teaching	
Use a variety of assessment techniques to determine the learning needs of students	1.54 *
Acquire specific skills e.g., questioning skills, task analysis	2.55 $
Develop research based strategies that are effective for specific disabilities	2.74
Adapt the physical environment to meet the needs of students with additional needs	3.50
Assess all students using the same methods (distractor topic)	4.68
Resources	
Develop understanding that resources need to be matched to students' learning needs	1.71 *
Develop awareness of technology to assist students with additional needs	2.44
Develop awareness of support personnel	2.72
Evaluate suitability of available resources	3.12

Note. The lowest mean rank indicates the most important topic.

***** Topic ranked significantly more important than other topics in category, at $p < .001$;

$ The difference in ranking between the most important and this topic did not reach significance.

Topics Viewed as Most important by Preservice Teachers

Significant differences in the ranking results of preservice teachers regarding the importance of topics for the preparation of preservice teachers for inclusive education was found for the following categories:

- Attitudes (χ^2 (3, N = 125) = 159.79, p = .00; Kendall's W coefficient = .43);
- Knowledge (χ^2 (3, N = 123) = 112.63, p =.00; Kendall's W coefficient = .31); and
- Skill areas of:
  - Classroom management (χ^2 (4, N = 123) = 81.81, p = .00; Kendall's W coefficient = .17);
  - Differentiation – skills to cater to a diversity of learners (χ^2 (3, N = 124) = 165.71, p = .00; Kendall's W coefficient = .45);
  - Differentiation – general practices for inclusive teaching (χ^2 (4, N = 124) = 149.38, p = .00, Kendall's W coefficient = .3); and
  - Resource use (χ2 (3, N = 125) = 47.20, p = .00; Kendall's W coefficient = .13).

Within the Collaboration category, preservice teachers ranked collaboration with parents/caregivers as most important, however, there were no significant differences between the rankings, χ2 (3, N = 125) = 6.01, p = .111; Kendall's W coefficient = .02.

Topics Viewed as Most Important by Experienced Teachers

Significant differences in the results of experienced teachers were found between topics regarding their importance for the preparation of preservice teachers for inclusive education for the following categories:

- Attitudes (χ^2 (3, N = 300) = 336.28, p = .00, Kendall's W coefficient = .37);
- Knowledge (χ^2 (3, N = 300) = 396.76, p = .00; Kendall's W coefficient = .44); and
- Skill areas of:
  - Classroom management (χ^2 (4, N = 299) = 292.89, p =.00; Kendall's W coefficient = .25);
  - Collaboration (χ^2 (3, N = 299) = 134.98, p =.00; Kendall's W coefficient = .15);
  - Differentiation – skills to cater to a diversity of learners (χ^2 (3, N = 299) = 513.03, p =.00; Kendall's W coefficient = .57);
  - Differentiation – general practices for inclusive teaching (χ^2 (4, N = 299) = 652.53, p =.00, Kendall's W coefficient = .55); and
  - Resource use (χ^2 (3, N = 299) = 190.58, p =.00; Kendall's W coefficient = .21).

These results show moderate to strong levels of agreement between the preservice and experienced teachers in the ranking of five out of seven topics with regard to importance of topics. Moreover, the results suggest a need to prioritise these topics to prepare preservice teachers for including students with disabilities during initial teacher education. Figure 1

shows the results for topics within categories ranked most important by both preservice teachers and experienced teachers.

Both groups regarded the following five topics as most important:

1.“apply syllabus information pertaining to students with disabilities” (Knowledge);

2.“develop skills to manage students with challenging behaviours” (Classroom Management);

3.“adjusting and accommodating to cater to students with disabilities” (Differentiation – *skills to cater to a diversity of learners*);

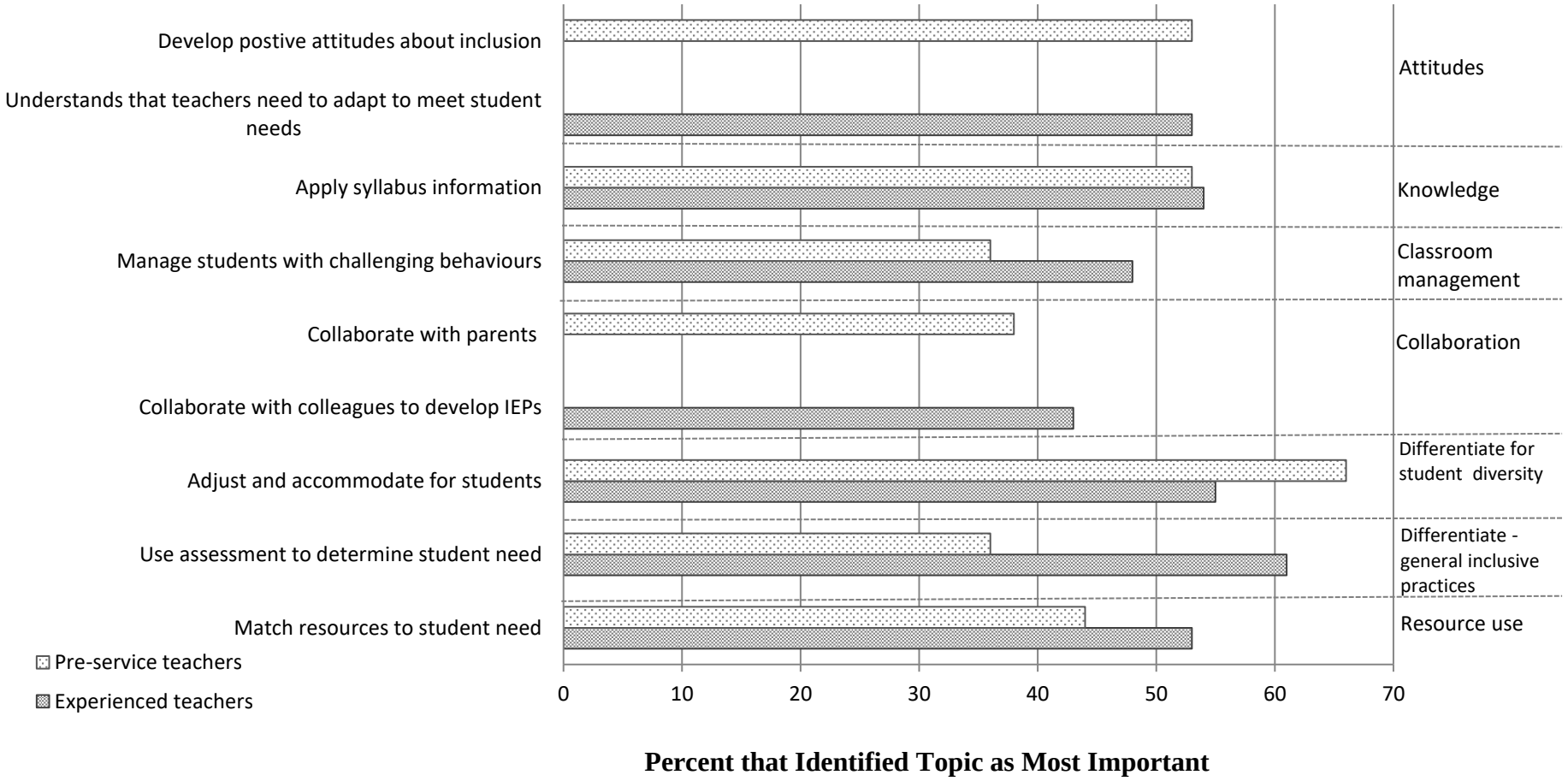
4.“use a variety of assessment techniques to determine the learning needs of students”(Differentiation – *general practices for inclusive teaching*); and

5. “develop understanding that resources need to be matched to student’s learning needs” (Resource Use)

as *most important* for the preparation of preservice teachers for inclusive teaching.

Figure 1

Ranked Topics within Areas (Attitudes and Knowledge) and Categories



Note. Most important topics within category. Percentage of preservice teachers and experienced teachers that identified these topics within each category as most important for preparing preservice teachers for inclusive teaching. IEP =individual education/learning plan

Skill Categories Viewed as Most Important by Preservice and Experienced Teachers

In addition, preservice and experienced teachers were asked to rank the four Skill Categories (Classroom Management, Collaboration, Differentiation and Resource Use) in order of importance.

Results show that preservice teachers ranked "differentiation skills to cater to the different needs of students" (*mean rank* = 1.49**,** $p = .00$) as significantly more important (χ^2 (3, N = 124) = 120.73, Kendall's W coefficient = .33) than "development of effective classroom management skills" (*mean rank* = 2.45, $p = .00$), "use of appropriate resources" (*mean rank* = 3.00, $p = .00$), and "collaboration skills" (*mean rank* = 3.06, $p = .00$).

Results reveal that experienced teachers ranked "differentiation skills to cater to the different needs of students" (*mean rank* = 1.60, $p = .00$) as most important, which was significantly greater than for "development of effective classroom management skills" (*mean rank* = 1.85, $p = .00$), "collaboration skills" (*mean rank* = 3.17, $p = .00$), and "use of appropriate resources" (*mean rank* = 3.38, $p = .00$). The result was significant χ^2 (3, N = 299) = 443.55, $p = .00$; the Kendall's coefficient of concordance of .49 indicate a moderate trend of agreement.

Both groups ranked "differentiation skills" as most important followed by the "development of classroom management skills". The findings offer insights into preservice and experienced teachers' views about topics they consider important to cover during initial teacher education to introduce preservice teachers to skills required to include students with disabilities. These findings hold implications for preparing preservice teachers for inclusive teaching. The results are discussed in relation to online delivery of inclusive courses.

Discussion

The first objective was to determine preservice teachers' preferred mode of delivery for inclusive education content. Preservice teachers (post-unit questionnaire) ranked tutorials as the most important component of their preparation for inclusive teaching, followed by lectures, assignments, and lastly online learning. The finding showing that preservice teachers' preferred mode of learning for the inclusive unit was face-to-face tutorials suggests that preservice teachers recognise the benefits of participating in the practical aspects of the tutorials. This is compatible with Bligh's (2000) findings that show that although university students enjoy well-presented lectures they prefer well-conducted group learning.

Given the adoption of online learning, the finding revealing that preservice teachers ranked online learning as their least preferred method of learning about inclusive education is concerning. The challenge for teacher educators is to ensure that positive on-campus

experiences are replicated in the online space. Consideration should be given to aspects of courses that are evaluated as effective and presented as online learning experiences. It is vital that online learning experiences are planned and delivered in such a way as to ensure that preservice teachers consider them to be highly effective ways to learn about including students with disabilities. Online delivery of inclusive content should be designed to address attitudes about inclusive education, convey knowledge and impart skills that prepare preservice teachers to cater for a diversity of learners in inclusive settings.

The second key objective was to establish curriculum priorities in the areas of attitudes, knowledge and skills. Given that typically there is more inclusive content that can be reasonably covered during initial education (Hodkinson, 2009), unit coordinators are required to make decisions about curriculum priorities. Research findings that identify curriculum priorities are likely to provide teacher educators with guidance when making decisions about course content. The following section discusses curriculum topics identified as important to prioritise to prepare preservice teachers for including students with disabilities. It begins by discussing the findings for specific topics under the themes of attitude, knowledge, and skills and is followed by discussing the findings of general categories. The implications for online learning are discussed.

Topics within Categories Regarded as Most Important

The discussion of the five topics within categories that both groups ranked as most important is followed by a discussion of the two categories ("Attitudes" and "Collaboration"), in which preservice and experienced teachers differed about the importance of topics.

Developing Knowledge about Inclusive Education

Preservice and experienced teachers ranked *apply syllabus knowledge pertaining to students with disabilities/additional needs* as most important among knowledge topics demonstrating the importance preservice and experienced teachers place on syllabus knowledge. This finding suggests that, whether courses are presented online or face-to-face, teacher educators should present learning experiences that familiarise preservice teachers with mandatory documents, essential policies and syllabuses to support inclusive education (e.g., adjusting outcomes). Notwithstanding this finding, both groups still regarded knowledge of referral processes to gain appropriate support (e.g., itinerant support teacher – vision/hearing) and disability legislation as very important.

Managing Inclusive Classes

In the category of Classroom Management, preservice and experienced teachers ranked *develop skills to manage students with challenging behaviours* as the most important topic to cover in inclusive units. This topic was ranked higher than "apply behaviour management theories", "manage cooperative learning", "develop strategies to teach social skills to students with disabilities /additional needs" and "implement risk assessments for students with challenging behaviours". These results underscore the need to ensure that, as initial teacher education opts for online delivery of inclusive content, preservice teachers are offered well-designed learning experiences that lead to skill acquisition to manage students with challenging behaviours.

These findings that highlight teacher concerns about managing students with challenging behaviours concur with those of Mayer et al. (2013) who found that principals rated classroom management, followed by pedagogy and catering for diverse learners, as the leading challenges facing beginning teachers. Significantly, Thomson et al. (2017) found that Australia scored significantly lower than the Organisation for Economic Co-operation and Development (OECD) average on the index related to classroom discipline indicating that many Australian schools experience more challenges with classroom discipline than across the OECD. Further, 33% of Australian students indicated that disorder and noise hindered learning compared to the OECD average of 24%. This was particularly an issue for students in disadvantaged schools. Goss et al. (2017) concluded that disengagement and disruption are "much worse in schools with many low socio-economic students (p. 10)". This finding highlights the interplay of factors that contribute to social disadvantage (e.g., refugee, disability) and school challenges. This finding is concerning for all students, however, in reference to this study it highlights concerns for students with disabilities in disadvantaged areas. For example, a student with a hearing loss or intellectual disability would find it particularly challenging to learn in noisy classrooms.

With the adoption of online learning increasing (Moorhouse, 2020; Scull et al., 2020; Shand & Farrelly, 2018), it seems important that designers of inclusive online content ensure that preservice teachers are presented with evidence-based learning experiences that equip them to effectively manage classes with a diversity of learners. For example, presenting videos of classroom scenarios that contrast effective with non-effective classroom management approaches (e.g., comparing de-escalation strategies to responses that escalate challenging circumstances) (Walker, 2021). Further, online learning experiences should be designed in such a way as to enable preservice teachers to commence their teaching careers

with a strong foundation in managing and organising contemporary inclusive classes.

Differentiating Instruction

In the two Differentiation categories (designated for study purposes as A and B) preservice and experienced teachers ranked the same topics, *adjusting and accommodating to cater to students with disabilities/additional needs* and *using a variety of assessment techniques to determine the learning needs of students* as most important within their respective categories. This consensus suggests that designers of online inclusive material or units should consider prioritising these topics. Online delivery could include learning experiences that show preservice teachers how to differentiate instruction. For example, video recorded demonstrations of how to use visual aids and scaffolds, modify instructions, and apply task analysis to support student learning. Further, it may be that preservice teachers require opportunities to develop skills in designing lessons that are inclusive of *all* students. This suggestion accords with those of Thomson et al. (2017), whose analysis of The Programme for International Student Assessment (PISA) data revealed that the percentage of students whose principals (of Australian schools) reported concerns about "teachers not meeting individual students' needs" was 38% and significantly higher than the OECD average of 23%.

Managing and Using Resources

Both preservice and experienced teachers ranked *develop understanding that resources need to be matched to students' learning needs (e.g., reading material)* as the most important topic within the "Resource" category. It seems that online learning for inclusive education should include experiences that provide preservice teachers with an understanding that learning materials need to be matched to students learning needs (e.g., enlarging font on interactive whiteboards to ensure students with low vision have access to content, ensuring that reading materials are matched to student reading age). Further, it is important that preservice teachers are given opportunities to learn about the roles of support teachers in schools. For example, recorded interviews or live on-line discussions with itinerant teachers or school counsellors explaining their roles could be presented.

Notably, findings indicate that experienced teachers ranked "awareness of support personnel" as more important than did preservice teachers. This finding may reflect the large number of support teachers (n = 106, 33%) who responded to the questionnaire. Given their pivotal roles, it is not surprising that they consider it important that preservice teachers develop an understanding of the role and expertise of support teachers (e.g., learning and support teacher).

Topics within Categories in which Preservice and Experienced Teachers Differed about Importance

The following section discusses the two categories, "Attitudes" and "Collaboration", where preservice and experienced teachers differed on the ordering of topics, including which topic they saw as "most important".

Developing Positive Attitudes about Inclusive Education

Within the "Attitude" category, preservice teachers ranked *develop positive attitudes regarding inclusion and diversity* as most important, whereas experienced teachers ranked *understanding that it is the role of teachers to meet the needs of all students* as most important, with *develop positive attitudes* the next highest. These results suggest that both groups felt that during initial teacher education, preservice teachers should be provided with learning experiences that require them to reflect on attitudes towards people with disabilities, which can often result in exclusionary practices. When designing online learning for inclusive education, it would seem that analysing the effect of school policies is likely to highlight inclusive and exclusionary practices. Examples of learning experiences could include: interrogating the usefulness of individual education plans; considering the effect of suspension policies, withdrawal programs and assessment protocols such as nationwide assessments; evaluating the effectiveness of approaches adopted by teacher assistants; appraising the cultures of schools and the attitudes of leadership and staff; as well as evaluating the appropriateness of curriculum and pedagogy. This finding aligns with Moore and Slee's (2012) assertion that failure to consider institutional causes of exclusion during initial teacher education results in inadequate preparation of preservice teachers.

Experienced teachers placed greater importance on learning to cater for students' individual needs than did preservice teachers. It would seem that both online and face-to-face learning experiences should advance preservice teachers' understanding that catering to the individual needs of students and considering their attainments takes precedence over acquiring knowledge about disabilities – albeit understanding areas of disability may provide important insights. Presenting video case-studies requiring preservice teachers to consider students' attainments and needs is likely to result in raising awareness about students' educational requirements.

These findings that highlight the importance that preservice teachers engage in experiences to examine the effect of attitude aligns with previous research recommending that they participate in learning that lead to their firm understanding that it is a class teacher's responsibility to cater for the learning needs of all their students (e.g., students with

intellectual disability, students who are gifted) as well as acquiring a clear view that students with disabilities have a rightful place in regular classes (Goodley, 2017). It seems important to build preservice teachers capacity to recognise and challenge cultures and structures within schools that propagate exclusion (Goodley, 2017; Moore & Slee, 2012). Videoed or live online interviews with people with disabilities about their experiences of teacher attitudes and language use are likely to inform preservice teachers about exclusionary attitudes and inclusive practices (Walker, 2021).

Collaborating with Stakeholders

Within the category of Collaboration, preservice teachers ranked *collaborating with parents and guardians* as the most important topic. This finding supports the Teacher Education Ministerial Advisory Group's (2014) recommendation that "higher education providers equip preservice teachers with skills to effectively engage with parents about the progress of their children (p. xv)". Experienced teachers, on the other hand, ranked *develop individual education plans collaboratively with colleagues* as the most important topic.

Even though preservice teachers ranked *collaborating with parents and guardians* as most important the result was not significantly different from the ranking of other collaboration topics. Importantly, it seems that preservice teachers require opportunities to develop and practise collaborative competencies such as active listening and collaborative planning in authentic settings. This finding supports McKenzie's (2009) conclusion that preservice teachers require targeted opportunities to develop skills to collaborate with parents and caregivers in authentic endeavours. The findings suggest that when designing online learning experiences, teacher educators should allocate time for preservice teachers to consciously practise collaborative skills. For example, setting exercises whereby preservice teachers use virtual meeting platforms (e.g., Skype) to role play a learning support meeting which is presented to the tutorial group.

General Categories regarded as Most Important

Preservice and experienced teachers ranked *differentiation skills to cater to different needs of students* as the most important overall category and ranked *development of effective classroom management skills* as second most important. Interestingly, findings indicate that both groups regarded *acquisition of differentiation skills* as more important than *development of classroom management skills.* This finding is interesting given that ongoing research has found that teachers are predominantly concerned with classroom management skills (e.g., Garwood et al., 2017). Perhaps both groups in this study view the ability to differentiate instruction as integral to creating positive classroom climates. This finding suggests that

teacher educators should be cognisant of the importance of designing effective learning experiences for the online environment that enhance beginning teachers needs particularly in the skill areas of differentiation and classroom management.

Limitations

The preservice teachers surveyed in this study came from one university in NSW, Australia. Further, the experienced teachers who responded to the survey worked largely in government schools in one state of Australia. Therefore, the sample is not representative of all preservice and experienced teachers and cannot be generalised to other contexts. Future research should be conducted to investigate, with the aim of improving, the effectiveness of online delivery of inclusive education programs during initial teacher education.

Conclusion

The present study sought to investigate preservice and teacher views about enhancing the preparation of preservice teachers for inclusive teaching. The findings hold implications for online delivery of inclusive education content during initial education. Results show that preservice teachers' least preferred mode of learning was online. As initial teacher education opts for online delivery of inclusive content, these findings are concerning given that inclusive education is considered contemporary practice. The findings identify areas of study and topics that preservice and experienced teachers believe would be beneficial to enhance preservice teachers' preparedness for including students with disabilities. Teacher educators could consider targeting particular areas and topics to address the needs of beginning teachers as they commence contemporary inclusive teaching. These findings could be used to guide the selection of content during curriculum development for online delivery of inclusive content.

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