The perceived influence of diversity factors on effective strategy implementation in a higher education institution

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Abstract

Managing diversity is one of the major challenges in higher education institutions in South Africa. Additionally, effective strategy implementation is vital for an institution to be successful and sustainable. Questionnaires were distributed to the management of Walter Sisulu University, South Africa, to investigate the relationship between diversity factors and effective strategy implementation. The questionnaires interrogated the effect of the acculturation process, the degree of structural integration, the degree of informal integration, institutional bias and intergroup conflict, and how these factors influence strategy implementation. Structural equation modelling (SEM) was employed as the statistical tool to confirm the hypothetical model. Results of this study revealed that there is no statistically significant relationship between diversity and strategy implementation at the institution, and imply that diversity among staff do not impact on the successful achievement of strategic objectives in the institution. The findings of the study are contrary to empirical evidence by other studies.

Keywords: Education, Sociology, Political science, Psychology
1. Introduction

“A brilliant strategy can put you on the competitive map, but only solid execution can keep you there — you have to be able to deliver on your intent” (Neilson et al., 2011:143). This guideline applies to higher education institutions (HEIs) as much as to other types of institutions. Without effective implementation no institutional strategy can succeed. Effective strategy implementation is crucial for operational efficiency and achieving long-term goals at the institution (Louw and Venter, 2013; Mankins and Steele, 2011; Neilson et al., 2011). However, various studies indicate that there are many obstacles, for example lack of communication and inadequate leadership, which may impede the successful implementation of an institution’s strategy (Hrebiniak, 2006; Jooste and Fourie, 2009; Kaplan and Norton, 2011). Studies on HEIs found that the multiple goals HEIs make effective strategy implementation complex (Miles et al., 2013; Ten Vergert, 2010). In this context, managing workforce diversity and multiculturalism are critical challenges faced by South African HEIs which affect their operation and influence the success of an institution’s strategy (Brevis and Vrba, 2015; Louw and Venter, 2013; Niemann, 2010).

Thus the challenge for HEIs is to strategically manage and align socio-cultural factors to achieve a competitive advantage (Louw and Venter, 2013; Norris, 2000; Rudhumbu and Chawawa, 2014). The underlying assumption is that managing diversity is an iterative process which is aligned with the institutional strategy (Darwin and Palanisamy, 2015; Gupta, 2013; Podsialdowski et al., 2013). The study proposed that a thorough understanding of workplace diversity prior to the implementation of an institutional strategy by HEIs can be an essential tool in managing a diverse workforce and implementing a successful strategy (Louw and Venter, 2013; Miles et al., 2013; Naidoo, 2015; Smit, 2007).

In the South African context, there are large historical imbalances from the past based on the differences between race, gender, language, social standing, education, economic status and workplace opportunities amongst others (Brevis and Vrba, 2015). This caused serious inequities within the South African society and the workforce, which includes higher education institutions. Concretely, the issue of diversity in South Africa and in South African HEIs are quite different from the same issue in the rest of the world. The post-apartheid HEIs are confronted with the task of recruiting and retaining black academics and other senior staff (Booi et al., 2017). As such, several South African universities engaged to recruit black academics and attempted to retain them through the ‘accelerated development’ of these candidates. Although it is suggested (Booi et al., 2017) that racialised, classed and gendered assumptions remain deeply entrenched in the values and practices of historically black universities in South Africa, it is also perceived to be the case in historically black
universities between academics and staff of different cultural groups, hence one of the reasons to perform this study at Walter Sisulu University (WSU).

Walter Sisulu University, an unique comprehensive university situated within a mainly poor rural area in the Eastern Cape Province of South Africa, was established in 2005 through the merger of three institutions. WSU has a footprint of about 1,000 square kilometres across the region. The coming together of three institutions with distinct and proud identities has proved to be challenging in that the employees of WSU have still not embraced a common culture (Council on Higher Education, 2011; Ncayiyana, 2011). The audit report on WSU by the Council of Higher Education suggested that each of the campuses had its own complex history and development challenges that added to the complexity of the merger. The Institutional Health Assessment at WSU concluded that issues of concern include differences between the merged institutions in terms of management structure, harmonisation of policies, processes and procedures across campuses, conditions of service and transparency between management and staff. The primary objective of this research was to investigate and analyse how workforce diversity, as inherited from the previous institutions, influence the strategy implementation within the context of the Walter Sisulu University. The justification is that workforce diversity in a multi-racial-multi-cultural country is just common sense and diversity management in South African HEIs is essential in terms of legal compliance, affirmative action, for ethical reasons and to create a positive organisational culture.

The study focussed on middle and top management at WSU, which are the backbone of institutional management and are responsible for strategy and strategy implementation, which includes diversity management. The study identified factors of workforce diversity and strategy implementation from theoretical models supporting this research. A hypothetical model portraying these factors was constructed, displaying each factor and their relationship with strategy implementation. Structural equation modelling (SEM) was used as the key statistical tool to test the model. The concepts, significance of effective strategy implementation, and theoretical models supporting the research were analysed to substantiate the construction of the hypothetical model.

1.1. Concept clarification

The focus of this research is on workforce diversity and strategy implementation and clear definitions of the terms are provided:

1.1.1. Workforce diversity

Workforce diversity implies differences among people, which includes any aspect such as age, gender, race, ethnicity, religion, socioeconomic background, education
and sexual orientation (Brevis and Vrba, 2015; Darwin and Palanisamy, 2015; Naidoo, 2015; Rudhumbu and Chawawa, 2014). This study assumes workforce diversity as a relational phenomenon that focuses on the similarities and differences between people and the way it influence relationships and are perceived in the workplace.

1.1.2. Strategy implementation

Strategy implementation is a dynamic, iterative and complex process, which comprises a series of decisions and activities by managers and employees to apply strategic plans in order to achieve strategic objectives (Dess et al., 2016; Smit, 2007; Venter, 2015; Zeps and Ribickis, 2015). For the purpose of this paper, strategy implementation will be defined as part of the strategic management process to turn the formulated strategy into a successfully achieved plan.

1.2. Theoretical models supporting the study

Theoretical models supporting diversity and strategy implementation factors are presented.

1.2.1. Factors influencing diversity

Three implementation process models of diversity were considered while analysing the factors that influence diversity in HEIs:

- Friday and Friday’s diversity implementation model (2003) proposes six steps (exposure, experience, knowledge, understanding, appreciate and respect) to assist employees and institutions in moving towards the desired state of diversity.
- Jones and George’s diversity implementation model (2016) provides guidance for implementing diversity effectively by suggesting that the entire institution needs to “buy in” and be committed for the diversity initiative to be implemented successfully.
- Cox’s diversity model (1993 & 2008) analyses the factors that have a successful impact on diversity initiatives, which is relevant to identify the diversity management factors (acculturation, structural integration, informal integration, institutional bias and intergroup conflict) in a South African HEI context (Cox, 2008; Strydom and Erwee, 1998).

A study by Strydom and Erwee (1998) applied these factors to investigate the perceptions of employees regarding the level of diversity management in a South African university, the University of Pretoria. Cox’s model (2008) emphasises the importance of optimal diversity management in realising institutional effectiveness. The diversity factors tested are:
Acculturation: signifies alternative strategies for resolving cultural differences between groups and/or for handling intercultural relationships to improve operational efficiency in an institution (Bjornsottir and Rule, 2016; Cox, 2008). McMahon (2010) suggests that pluralism is the preferred acculturation mode, where both culture groups change to a certain degree to reflect a common set of norms and values.

Degree of structural integration: refers to the levels of heterogeneity that exist within the formal institutional structure (Gupta, 2013; Ferreira and Groenewald, 2016). According to Cox (2008), degree of structural integration is applied to measure an institution’s progress towards equal opportunities, including affirmative action activities.

Degree of informal integration: the extent to which all identity groups have access to social and communication networks (Darwin and Palanisamy, 2015; Cox, 2008). Hellriegel et al. (2012) suggest that informal integration refers to the inclusion of minority members in social activities frequented by leaders.

Intergroup conflict: refers to what is explicitly related to socio-cultural group differences (Cox, 2008; Nedkovski et al., 2017). Accordingly, Li et al. (2017) suggest that low intergroup conflict is a clear indicator of the good quality of the relations between groups.

Institutional bias: refers to the preference patterns inherent in the way institutions are managed which often inadvertently create barriers to full participation by institutional members from cultural backgrounds that differ from the traditional majority group (Cox, 2008; Mor Barak, 2011; Rudhumbu and Chawawa, 2014).

1.2.2. Factors of strategy implementation

Thompson et al. (2016) argued that although an institution’s strategy implementation approach has to be tailored to the particulars of the institution’s situation, certain components have to be covered no matter what the circumstances. Consequently the process of implementing strategy involves the following eight factors: Building competencies and capabilities to execute strategies; sufficient financial resources to drive strategy execution; adequate human resources to drive strategy execution; implementing policies and procedures necessary for effective strategy implementation; adopt best practice for continuous improvement; provide information and operating systems that enable strategy execution; link rewards and incentives directly to the achievement of targets; exercise strong leadership to drive strategy execution.

Various elements and factors have a significant impact on strategy implementation, namely: the framework according to which strategy is implemented (Higgins, 2005; Venter 2015); the role of leadership and institutional culture in advancing implementation (Jooste and Fourie, 2009; Kotter, 2011; Neilson et al., 2011); and the importance of alignment of the internal strategy for effective implementation (Kaplan and
Norton, 2011; Louw and Venter, 2013; Smit, 2007). All these elements impact upon strategy implementation, and if managed effectively, result in successful strategy implementation which in turn manifests in positive strategic outcomes. Strategic outcomes in higher education institutions include the following: operational efficiency; competitiveness; market share; communication; sustainability and value creation (Johnson et al., 2008; Louw and Venter, 2013; Neilson et al., 2011; Porter, 2011; Thompson et al., 2016).

1.3. The proposed hypothetical model

Based on the analysis of secondary sources a hypothetical model of diversity and its impact on strategy implementation was constructed. The model shows that strategy implementation, which is designated as the dependent variable, is influenced by the independent variable, namely diversity. The dimensions of diversity are shown to directly influence strategy implementation which influences strategic outcomes. The proposed hypothetical model is depicted in Fig. 1.

The purpose of the research is twofold: firstly, to empirically test the hypothetical model. When testing the model, care will be taken that the research instrument will encapsulate all the dimensions of diversity which impact on strategy implementation. The second purpose of the research is to test the hypothetical model by gauging the opinions, perceptions, expectations and actual experiences of WSU’s staff regarding the impact of diversity on strategy implementation. Based on the hypothetical model for strategy implementation (Fig. 1) the following research hypotheses can be formulated, as substantiated by secondary sources on diversity and strategy implementation.

Fig. 1. Hypothetical model for the influence of diversity on strategy implementation.
1.3.1. Effect of workforce diversity dimensions on strategy implementation

H₁: Perceptions of management and senior staff regarding the acculturation process are related to strategy implementation in a HEI.

H₂: Perceptions of management and senior staff regarding the degree of structural integration are related to strategy implementation in a HEI.

H₃: Perceptions of management and senior staff regarding the degree of informal integration are related to strategy implementation in a HEI.

H₄: Perceptions of management and senior staff regarding institutional bias are related to strategy implementation in a HEI.

H₅: Perceptions of management and senior staff regarding intergroup conflict are related to strategy implementation in a HEI.

2. Method

The methodology used to address the research problem of this study will be described as follows: the research approach, sample, research instrument, data collection and data analysis.

2.1. The research approach

The positivistic research paradigm was proposed to ascertain WSU staff’s opinions and perceptions regarding diversity and to examine the assumed relationship with strategy implementation empirically. The motivation for selecting the quantitative approach lies in the relationships and hypotheses to be tested. Since the research variables were pre-specified based on secondary sources, structural equation modelling (SEM) was employed as the statistical tool to confirm the hypothetical model. The rationale for using SEM above other multivariate techniques that SEM can simultaneously estimate relationships between multiple independent, dependent and latent variables (Byarugaba, 2010). A second motivation for using SEM is the greater recognition given to the validity and reliability of observed scores from the measurement instrument (Blunch, 2013).

2.2. Sample

The target population for the research and analysis was every person in Walter Sisulu University’s executive and senior management, senior administrative staff, and senior academic staff, including heads of departments and programme coordinators.
The sampling frame comprised 427 WSU employees, which were identified to be involved in this group (Table 1), to be tasked with strategy implementation. A final sample of 266 usable questionnaires was obtained, giving a 62% response rate. The executive and senior management category responded at 84%, which was significant as this is the leadership structure of the university.

Table 1 shows that most of the respondents were male (65%), and that 34% per cent of the respondents were under the age of 45 years, while 46% were aged between 46 to 55 years. A small percentage (20%) was older than 56 years. Regarding the level
of education, over half of the respondents had either a Masters (37%) or Doctoral degree (17%), as can be expected at a HEI. The majority of respondents are Black or African (74%).

Position wise, the manager or supervisor category obtained the highest response rate (21%), followed jointly by executive or senior management and senior Academic (18% each). Senior support staff comprised 17% of the sample, programme coordinators 15% and Heads of Department 11%. Respondents with 11 years or more service at the institution comprised 65% of the sample and merely 9% have been employed at the institution for less than five years. The highest percentage of respondents are employed at the Buffalo City Campus (48%), followed by Mthatha campus (32%). Respondents were employed in management (19%), as support staff (36%) or academics (45%). All respondents are involved with strategy implementation and are therefore knowledgeable enough to complete the questionnaire.

2.3. Research instrument

A structured questionnaire was drafted from the information obtained in the literature study and comprised three sections. The first section contained statements on the factors influencing diversity; the second section examined whether the drivers of strategy implementation are in place; and the third section questioned whether strategy implementation has been effective. Respondents were asked to rate statements according to a five-point Likert-type interval scale anchored from strongly disagree (1) to strongly agree (5). The second section of the questionnaire solicited biographic data using a nominal scale. Data included for example gender, position and racial group of the designated sampling frame group. Ethics approval was granted by the Research Ethics Committee and by the directorate of research at WSU. The questionnaire was first tested for validity and reliability in a pilot study before it was administered to the respondents.

2.4. Data collection

Primary data were collected using a survey by means of a self-administered questionnaire. The questionnaires were distributed by the researcher via email and on hard copy to the respondents. A copy of the letter from the university’s research directorate explaining the purpose of the study was attached to each questionnaire. Emails with the questionnaire were sent regularly. Follow-up visits were executed to non-respondents to complete hard copies of the questionnaire. Data were collected with the aid of two fieldworkers over a period of four months resulting in 266 usable questionnaires.
2.5. Data analysis

The data were analysed using SEM, a confirmatory approach in inferential data analysis, as the researcher had preconceived ideas about the actual structure of the data from the underlying theory. The statistical program AMOS 19.0.0 (Build 1376) was used to obtain estimates of the free parameters from the observed data.

Confirmatory factor analysis was used to verify that the identified diversity factors had relationships with strategy implementation and to assess convergent validity. Cooper and Schindler (2008) affirm that “convergent validity” refers to the degree to which scores on one scale correlate with scores on other scales designed to assess the same construct. Hair et al. (1998:112) suggested that the required pattern coefficients are directly associated with the sample size. Guidelines for identifying significant pattern coefficients specify that a sample size of 250 respondents are required for pattern coefficients of 0.35. Therefore, a cut-off level of pattern coefficients of 0.35 was adequate to indicate convergent validity for this study, since the sample size comprised 266 respondents.

Cronbach’s alpha reliability coefficients were used to verify the consistency of the inter-item reliability of the research instrument. Cronbach’s alpha reliability coefficient essentially measures the proportion of variation within a set of items, which can be attributed to some kind of common cause (Hair et al., 2010). A Cronbach’s alpha coefficient of more than 0.70 was used to indicate a factor as reliable. Descriptive statistics were employed to indicate the mean scores and standard deviation of the factors.

3. Results

The analysis of secondary sources from the hypothetical model of diversity and its impact on strategy implementation were completed by analysing the perceptions of management and senior staff according to the questionnaire responses following the model (Fig. 1). The variables analysed were:

- Acculturation (H₁);
- Degree of structural integration (H₂);
- Informal Integration (H₃);
- Institutional Bias and (H₄);
- Intergroup conflict (H₅);

The model shows that strategy implementation, which is designated as the dependent variable, is influenced by the independent variables namely diversity. The dimensions of diversity are shown to directly influence strategy implementation. The proposed hypothetical model is depicted in Fig. 1.
From Table 2 it is evident that with regard to the diversity factors impacting strategy implementation all mean scores trend towards 3 (neutral) which indicates respondents are undecided whether diversity indeed impacts strategy implementation. Based on the mean score, respondents disagree (rating 2) about perceptions regarding strategy implementation taking place in this institution. However the mean score of strategic outcomes lies on the neutral side of the scale (rating 3) indicating they are uncertain if these strategic outcomes have indeed materialised in the institution. Standard deviation scores are all below 1, indicating there is not much variability around the means scores.

3.1. Validity and reliability of the pre-specified factors for diversity
The main diversity factors or variables tested during the research is shown in Table 2 (Factors). In order to test the perceptions of executive and senior management about these five (5) factors, five (5) separate questions were in the questionnaire as statements for the respondents to react too. As can be seen in Table 3, the twenty five statements measuring the latent variable diversity were grouped into five constructs (Table 2), each construct measured by five statements (Table 3).

The questions for each of these factors are shown in Table 3. As an example, the five statements dealing with acculturation, or the “acculturation construct” have the SEM variables “ACCUL1 to ACCUL5”. The twenty five statements in the questionnaire to measure the five constructs of diversity are reported in Table 3.

3.2. Validity and reliability of the measuring instrument
Regarding the validity and reliability of the measuring instrument in this study Confirmatory Factor Analysis (CFA) was used. The independent variables (statements) that measure a specific latent variable should share a high proportion of variance in common, known as convergent validity. There are several ways available to estimate convergent validity. The size of the indicator loadings of the different items onto the latent variable is one important consideration. A rule of thumb is that factor

| Dependent variable | Factors                        | Mean   | Standard deviation |
|--------------------|--------------------------------|--------|--------------------|
| Diversity          | Acculturation                  | 2.598  | 0.787              |
|                    | Degree of structural integration| 2.774  | 0.695              |
|                    | Informal integration           | 2.999  | 0.694              |
|                    | Institutional bias             | 2.519  | 0.793              |
|                    | Inter group conflict           | 2.990  | 0.666              |
| Strategy implementation |                               | 2.380  | 0.712              |
Table 3. Statements for the diversity factors to obtain the SEM variables of constructs.

| Construct: Acculturation (Accul) | In our institution WSU |
|----------------------------------|------------------------|
| Item no.                         |                       |
| ACCUL1                           | Cultural differences are effectively managed |
| ACCUL2                           | There is a shared culture with the same values and beliefs amongst staff |
| ACCUL3                           | There is sense of certainty due to adequate sharing of beliefs and values |
| ACCUL4                           | Different culture groups are equal and accommodate each other |
| ACCUL5                           | Staff from various cultural backgrounds change their way of thinking to reflect the norms and values of others |

| Construct: Degree of Structural Integration (Struc) | In our institution WSU |
|-----------------------------------------------------|------------------------|
| Item no.                                            |                       |
| STRUC1                                              | There is equal employment opportunities for previously disadvantaged groups at all levels |
| STRUC2                                              | There is proportionate representation of various ethnic groups in the power structures |
| STRUC3                                              | Previously disadvantaged groups are advanced without violating the rights of other groups |
| STRUC4                                              | There are adequate resources to implement structural changes regarding employment equity |
| STRUC5                                              | Structural changes are implemented to accommodate institutional policies and procedures of employment equity |

| Construct: Degree of informal integration (Inform) | In our institution WSU |
|-----------------------------------------------------|------------------------|
| Item no.                                            |                       |
| INFORM1                                             | Social networks are used as a means of informal communication |
| INFORM2                                             | Minority groups have equal access to informal network groups |
| INFORM3                                             | The informal network allows staff to have a sense of belonging and acceptance of others |
| INFORM4                                             | Similarity forms the basis of social interaction and informal networks |
| INFORM5                                             | Mentoring is provided to support and guide inexperienced staff |

(continued on next page)
loadings should be at least 0.5, and ideally 0.7 or higher (Schreiber et al., 2006). However, Hair et al. (2010) suggested that for the sample size of this study a loading of 0.35 is acceptable. Table 4 displays the confirmatory factor matrix for diversity.

The factor loadings in Table 4 illustrated loadings ranging between 0.104 and 0.880. Since the sample size of this study comprises 266 questionnaires, 0.35 may be accepted as the minimum cut-off level for statistical analysis. All the statements with factor loadings less than 0.35 were eliminated (Hair et al., 2010). Only one item (BIASHR5) in the institutional bias factor was deleted. The new adjusted Cronbach’s alpha value for the deleted item is reported in Table 5.

An examination of the initial Cronbach’s alpha reliability coefficients for diversity found that for the factors acculturation, structural integration, informal integration and intergroup conflict all had factor loadings above 0.35. As can be seen in Table 4, only one item in the factor institutional bias needs to be deleted. The new Cronbach’s alpha value for the institutional bias factor after deletion of the

| Construct: Institutional bias (Biasr) |   |
|--------------------------------------|---|
| Item no.                             | In our institution WSU |
| BIASHR1                              | The human resource systems are unbiased towards different cultural groups |
| BIASHR2                              | HR conducts regular cultural audits (reviews) with regards to ethnic representation |
| BIASHR3                              | HR policies and practices are changed to accommodate the needs of the diverse workforce |
| BIASHR4                              | HR systems accommodate staff with different lifestyles and diverse needs |
| BIASHR5                              | HR practices of the past impact implementation of current practices |

| Construct: Intergroup conflict (Confl) |   |
|---------------------------------------|---|
| Item no.                             | In our institution WSU |
| CONFL1                                | Conflict due to opposing interest and views of diverse staff groups is effectively managed |
| CONFL2                                | Conflict due to opposing interest and views of diverse staff groups is effectively managed |
| CONFL3                                | Collaboration is the most acceptable strategy for managing and reducing group conflict between groups |
| CONFL4                                | Intergroup conflict does not distract ethnic staff from achieving institutional goals |
| CONFL5                                | Ethnic staff do not experience conflict as a result of a diverse workforce |
one item is 0.793 which signals that the reliability of the measuring instrument for diversity can be described as acceptable.

With regard to the validity of the research instrument, the pattern coefficients after deletion of the one item in institutional bias demonstrated loadings ranging between

| Items     | Acculturation | Structural integration | Informal integration | Intergroup conflict | Institutional bias |
|-----------|---------------|------------------------|----------------------|---------------------|--------------------|
| ACCUL1    | 0.726         |                        |                      |                     |                    |
| ACCUL2    | 0.827         |                        |                      |                     |                    |
| ACCUL3    | 0.827         |                        |                      |                     |                    |
| ACCUL4    | 0.504         |                        |                      |                     |                    |
| ACCUL5    | 0.504         |                        |                      |                     |                    |
| STRUC1    | 0.429         |                        |                      |                     |                    |
| STRUC2    | 0.442         |                        |                      |                     |                    |
| STRUC3    | 0.522         |                        |                      |                     |                    |
| STRUC4    | 0.653         |                        |                      |                     |                    |
| STRUC5    | 0.749         |                        |                      |                     |                    |
| INFORM1   | 0.639         |                        |                      |                     |                    |
| INFORM2   | 0.680         |                        |                      |                     |                    |
| INFORM3   | 0.691         |                        |                      |                     |                    |
| INFORM4   | 0.517         |                        |                      |                     |                    |
| INFORM5   | 0.499         |                        |                      |                     |                    |
| CONFL1    | 0.588         |                        |                      |                     |                    |
| CONFL2    | 0.483         |                        |                      |                     |                    |
| CONFL3    | 0.413         |                        |                      |                     |                    |
| CONFL4    | 0.708         |                        |                      |                     |                    |
| CONFL5    | 0.690         |                        |                      |                     |                    |
| BIASHR1   | 0.479         |                        |                      |                     |                    |
| BIASHR2   | 0.640         |                        |                      |                     |                    |
| BIASHR3   | 0.880         |                        |                      |                     |                    |
| BIASHR4   | 0.835         |                        |                      |                     |                    |
| BIASHR5   | 0.104         |                        |                      |                     |                    |
| Cronbach’s alpha | 0.839 | 0.691 | 0.733 | 0.722 | 0.700 |

Table 4. Confirmatory factor pattern matrix for diversity.

Table 5. Adjusted Cronbach’s alpha values for diversity.

| Item     | Factor      | Cronbach’s alpha before deletion | Deleted item | Cronbach’s alpha after deletion |
|----------|-------------|----------------------------------|--------------|--------------------------------|
| 16–20    | Institutional bias | 0.700                           | BIASHR5      | 0.793                           |

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0.429 and 0.880, which are all above the 0.35 cut off level. This indicates acceptable levels of inter-correlation between the items (statements) and pre-specified factors. This finding illustrates that the scale demonstrates the relationships shown to exist based on the theory and/or prior research. Consequently, the convergent validity of this scale can be confirmed and can be used to assess diversity. The results of the reliability and validity of each of the pre-specified factors evaluated for diversity are below and Table 6 provides a summary of the statistically significant relationships of the diversity model:

- Acculturation (H1): All five pre-specified statements associated with acculturation anticipated pattern coefficients ranging between 0.504 and 0.827. This factor has a Cronbach’s alpha reliability coefficient of 0.839, which indicates a high level of internal reliability;
- Structural integration (H2): The five pre-specified statements loaded on the factor structural integration. The pattern coefficients reflect loadings between 0.429 and 0.749. This factor has a Cronbach’s alpha reliability coefficient of 0.691 (rounded to 0.7), indicating an acceptable level of reliability;
- Informal integration (H3): The five pre-specified statements measuring the variable informal integration have indicated pattern coefficients of between 0.499 and 0.691. The Cronbach’s alpha reliability coefficient is 0.733, indicating an acceptable level of reliability;
- Institutional bias (H4): Only four of the five pre-specified items of this scale loaded on the factor institutional bias with pattern coefficients between 0.479 and 0.880. The Cronbach’s alpha reliability coefficient for this scale is 0.700, indicating an acceptable level of reliability.
- Intergroup conflict (H5): The five pre-specified statements pertaining to intergroup conflict recorded pattern coefficients between 0.413 and 0.708. The Cronbach’s alpha reliability coefficient for this scale is 0.722, indicating an acceptable level of reliability;

Table 6. Summary of the statistically significant relationships of the diversity model.

| Factor                  | Path coefficients | Standard error | Critical ratio | Outcome     |
|-------------------------|-------------------|----------------|----------------|-------------|
| Acculturation process   | 0.606             | 0.058          | 7.675*         | Supported   |
| Degree of structural integration | 0.892            | 0.065          | 7.850*         | Supported   |
| Degree of informal integration | 0.563            | 0.057          | 5.689*         | Supported   |
| Institutional bias      | 0.092             | 0.058          | 1.588          | Not supported |
| Intergroup conflict     | 0.931             | 0.064          | 6.750*         | Supported   |

p-value < 0.001.

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- Intergroup conflict (H5): The five pre-specified statements pertaining to intergroup conflict recorded pattern coefficients between 0.413 and 0.708. The Cronbach’s alpha reliability coefficient for this scale is 0.722, indicating an acceptable level of reliability;
The results (Table 6) indicate that the factors for diversity are valid and reliable. It is discussed in more detail below:

- **H₁**: There is a relationship between the perceptions regarding *acculturation and diversity* in a higher education institution: The critical ratio for the path parameter between the latent variable acculturation and diversity is 7.675 which is greater than 1.96, thereby indicating a statistical relationship. The path coefficient is positive (0.606) and the magnitude of the path coefficient can be regarded as moderately strong. Consequently H₁ is supported;

- **H₂**: There is a relationship between *degree of structural integration* and *diversity* in a higher education institution: The critical ratio for the path parameter between the latent variable degree of structural integration and diversity is 7.850 which is greater than 1.96, indicating a statistical relationship. The path coefficient is positive (0.892) and the magnitude of the path coefficient can be regarded as strong. H₂ is supported;

- **H₃**: There is a relationship between the perceptions regarding *degree of informal integration* and *diversity* in a higher education institution: The critical ratio for the path parameter between the latent variable degree of informal integration and diversity is 5.689 which is greater than 1.96, indicating a statistical relationship. The path coefficient is positive (0.563) and the magnitude of the path coefficient can be regarded as moderately strong. Consequently H₃ is supported;

- **H₄**: There is a relationship between the perceptions regarding *institutional bias* and *diversity* in a higher education institution: The critical ratio for the path parameter between the latent variable institutional bias and diversity is 1.588 which is smaller than 1.96, indicating no statistically significant relationship. The path coefficient is positive (0.092) but the magnitude of the path coefficient is weak. H₄ is not supported;

- **H₅**: There is a relationship between the perceptions regarding *intergroup conflict* and *diversity* in a higher education institution: The critical ratio for the path parameter between the latent variable intergroup conflict and diversity is 6.750 which is greater than 1.96, indicating a statistical relationship. The path coefficient is positive (0.931) and the magnitude of the path coefficient can be regarded as very strong, and H₅ is supported.

### 3.3. Results of the diversity - strategy implementation model

In this model diversity is regarded as a parcel. Parcels are defined as aggregations (sum or averages) of several individual statements. There are several advantages of using parcels rather than individual statements as indicators of latent variables (Blunch, 2013). The parcels in this study are calculated based on the average of the five statements for each construct measuring the specific construct. The statements making up these parcels are summarised in Table 7. The following hypotheses
(H₀) was tested: There is a relationship between the perceptions regarding diversity and strategy implementation in a higher education institution.

The measuring instrument to measure the construct strategy implementation contains eight statements in the questionnaire and is shown in Table 8.

The results of the goodness-of-fit indices for the diversity-strategy implementation model is given in Table 9.

The ratio of $\chi^2$ to degrees of freedom (dof) is $\chi^2$: dof is 5.308, which is higher than the threshold of three, indicating no model fit. The GFI is 0.847 which is above the threshold of 0.8 for an acceptable model fit. The CFI value is 0.805 which is just below the threshold of 0.9, indicating no model fit. The RMSEA value is 0.128 which is above 0.10, indicating no model fit. The upper limit of the 90% confidence interval for RMSEA is 0.137, which is above the threshold value of 0.08 indicating no model fit.

Table 7. Summary of the statements included in each parcel item.

| Parcel: Diversity (diversity) | Parcel item |
|-------------------------------|-------------|
| (ACCUL1 + ACCUL2 + ACCUL3 + ACCUL4 + CCUL5)/5 | DIVERSITY1 |
| (STRUC1 + STRUC2 + STRUC3 + STRUC4 + STRUC5)/5 | DIVERSITY2 |
| (INFORM1 + INFORM2 + INFORM3 + INFORM4 + INFORM5)/5 | DIVERSITY3 |
| (CONFLIC1 + CONFLICT2 + CONFLICT3 + CONFLICT4 + CONFLICT5)/5 | DIVERSITY4 |

Table 8. Statements measuring the latent variable strategy implementation.

| Label       | Our institution WSU                                                                 |
|-------------|-------------------------------------------------------------------------------------|
| COMP/CAP    | Builds competencies and capabilities to execute strategies                           |
| FIN RES     | Provides sufficient financial resources to drive strategy execution                 |
| HUM RES     | Supplies adequate human resources to drive strategy execution                        |
| POL/PRAC    | Implements policies and procedures necessary for effective strategy implementation  |
| INFO/SYS    | Provides information and operating systems that enables strategy execution           |
| REWARD      | Links rewards and incentives directly to the achievement of strategic targets        |
| LEADER      | Exercises strong leadership to drive strategy execution                              |
| B/PRAC      | Adopts best practices for continuous improvement in institutional processes          |

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The critical ratio for the path parameter between the latent variable diversity and strategy implementation is 0.614 which is less than 1.96, indicating no statistically significant relationship. The path coefficient is positive (0.034) and the magnitude of the path coefficient is weak, compared to the threshold value of one. Consequently, the data do not support or fit the model as not one of the indices provided a suggested fit, to prove H6, which consequently is not supported.

4. Discussion

Results of this study indicate that diversity has statistically no significant influence on strategy implementation in the institution. Diversity refers to the differences in characteristics among people and the way these differences are perceived and acted upon, whilst strategy implementation refers to the successful achievement of strategic objectives. The findings thus imply that differences among staff at the institution do not impact on the successful achievement of strategic objectives in an institution.

Since the results found that the proposed diversity-strategy implementation model did not fit the data, hypothesis H6 has been rejected. It should be noted that, although the constructs measuring diversity are indeed adequate measures of diversity, these constructs representing the independent variable diversity, do not have a significant relationship with strategy implementation. These findings of the study are contrary to empirical evidence by Dess et al. (2016) who argued that as institutions become more diverse, effective diversity management will implement strategies more effectively. In addition, Zanoni et al. (2010) emphasised that sound management of a diverse workforce can lead to successful strategy implementation. The more employees share a sense of belonging and identification in terms of common values and goals, the greater their levels of motivation and productivity, and this will impact positively on the strategy implementation (Cavaleros et al., 2002; Nedkovski et al., 2017; Zeps and Ribickis, 2015). Furthermore, Zanoni et al. (2010) and Li et al. (2017) believed that low inter-group conflict in the institution suggests that stable

| Goodness of fit indices | Results |
|-------------------------|---------|
| $\chi^2$/df             | 5.308   |
| GFI                     | 0.847   |
| CFI                     | 0.805   |
| RMSEA                   | 0.128   |
| 90% confidence internal for RMSEA | 0.118; 0.137 |

Sample size = 266.
and acceptable relationships are present in the institution, and this supports effective strategy implementation.

However, in support of the findings of the study, Cox (2001) cautioned against two possible challenges to be encountered in respect of diversity’s relationship with strategy. The first challenge is to successfully integrate diversity with the strategy of the institution. The diversity strategy must be integrated with the overall strategy and mission of the institution (Cox, 2001). For example, in universities this means having staff of different gender and race, has the potential to improve the quality of teaching and research. The second challenge is to ensure that managing diversity becomes an integral part of the overall strategy of the institution. Cox (2001) recommends that this can be achieved by specifying managing diversity as a formal component of the institution’s strategy.

5. Conclusion

Although it was found that various factors such as acculturation, degree of structural integration, degree of informal integration and intergroup conflict impact diversity, there is no statistically significant relationship between diversity and strategy implementation at the institution. The findings of the study are contrary to findings of various researchers (Dess et al., 2016; Gupta, 2013; Jayne and Dipboye, 2004; Naidoo, 2015; Nedkovski et al., 2017; Zanoni et al., 2010) who reported a relationship between diversity and strategy implementation.

This would suggest that diversity needs to be effectively managed for it to have an influence on strategy implementation. There are neither a diversity program nor diversity management in place at WSU, this could perhaps be a reason why the results of the study do not concur with previous findings. The employment equity study conducted at WSU recommended the implementation of a diversity management programme to drive the university towards a new desired culture, which still needs to be implemented. Furthermore, the overwhelming majority of staff members, as well as management, are from the same ethnic affiliation.

Previous studies (Miles et al., 2013; Naidoo, 2015; Norris, 2000; Rudhumbu and Chawawa, 2014) found that the management of diversity in a higher education institution can only be properly executed if it forms part of an institution’s strategic management process. Furthermore Cox (2001) stated that failure to successfully integrate the work on diversity with the strategy of the institution is one of the most serious sources of failure for diversity change-work. It is thus perceived that diversity needs to be integrated with strategy and needs to be aligned with strategy. The second challenge is to ensure that managing diversity becomes an integral part of the overall strategy of the institution, as it can only have an impact on strategy implementation if these conditions are met.
For diversity to have a significant relationship with strategy implementation at WSU, it is recommended that management should integrate diversity management with the human resources policy and other strategic choices of the institution without delay. The strategy for successful diversity management practices have to be linked to the institution’s diversity management goals. This study was conducted at a rural developmental university, Walter Sisulu University, which is a merged institution. However, it is not thoroughly merged and some of the different campuses are more than 250 km apart, which poses challenges for effective strategy implementation. A comparative study with another higher education institution, with similar conditions prevailing, would assist in verifying and enhancing the credibility of the findings of the study.

Declarations

Author contribution statement

Kariena Strydom: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

CJS Fourie: Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

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Competing interest statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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