Research article

Psychometric Properties of a Short Measure for South African First-Year Students' Perceptions of Fit with their Courses of Study

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Abstract

The first year of higher education is one of the most critical and challenging times in a student's life and choosing a specific course of study can be very difficult. Often, first-year students realize they have different expectations from the courses of study they chose and perceive that their abilities, skills, interests, and ambitions for a future career do not match their chosen courses of study. When the wrong choice has been made, and there is no intervention to choose a course with a more appropriate fit, students may decide to leave university prematurely, which may have a major impact on a student's life. Identifying students who do not experience alignment with their choice of study course, and offering these students assistance and guidance, is imperative for universities to retain as many students as possible. Unfortunately, there is a paucity of research on a short scale that measures student-course fit validly and reliably, and which can be fairly applied to different groups in an unbiased manner. This study analyses the psychometric properties of a measure of students' perceptions of fit with their course of study, adapted from a widely used person-job fit scale. Statistical techniques used to determine the validity and reliability of this scale were structural validity, differential item functioning to determine item bias, measurement invariance, and reliability. A quantitative, cross-sectional design was used. A sample (N = 1,211) of South African first-year university students studying at a university with three different campuses was used. As expected, confirmatory factor analysis provided evidence of a one-factor structure. No item bias was present for language and gender groups. Although item bias was present for item 2 between campuses, the post hoc analysis indicated that the impact was practically negligible. Measurement invariance was established, as well as good reliability of the scale. The findings of this study can contribute to knowledge concerning the valid, reliable and fair measurement of first-year students' perceived fit with their courses of study. In addition, insights could assist universities in identifying students who need proper career guidance to better match with their chosen courses of study.

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Keywords

study-course fit, first-year university students, structural validity, item bias, measurement invariance, internal consistency

Introduction

One of the most important decisions first-year students must make is choosing a university and suitable courses of study to pursue fulfilling careers. However, deciding which course to follow can be difficult for students because they are often underprepared and unprepared to make decisions of this magnitude (Freedman, 2013). Many first-year students find themselves registered for courses or programmes that are not aligned with their interests and career aspirations; as a result, they find themselves dissatisfied, unmotivated for academic success and making slow progress (Partenie, 2019). It is crucial for students to have a positive experience at university and in their study programmes during their first year of study because it is during this year that universities either retain or lose their students (Lekena & Bayaga, 2018; Tinto, 2014). In a telephone survey of undergraduate students who withdrew in their first year of study, Harrison (2006) reported that nearly half of all participants withdrew for reasons related to their course. Therefore, understanding first-year students' career decisions, the factors driving their choice of a study course and assisting them during this process is essential for retaining students (Hickey et al., 2013; Sim et al., 2021).

One of the aims stipulated in the National Plan of Higher Education in South Africa is to direct the type of enrolment of students in higher education concerning their chosen fields of study to better align with the needs of society and the economy of South Africa (Department of Higher Education and Training [DHET], 2018). Being well-informed about the content and requirements of the course of interest is also essential for later motivation to continue in the chosen occupational field (Hillmert et al., 2018). Therefore, it is essential that students experience a good *fit* or *match* with their chosen course of study, as it contributes to the mandate and objective of the DHET to lead and co-ordinate career development services in South Africa (DHET, 2019).

Study-course fit is closely related to person-job fit, traditionally referred to as the match between an applicant's knowledge, skills, and abilities to job requirements (Saks & Ashforth, 1997). Person-job fit theory stems from the interaction theory, of which the basic assumption is that the function of the interaction between an individual and the environment leads to specific behavioural outcomes; when there is a good fit between the person and the environment, it leads to positive outcomes for the individual (Tak, 2011). Kucuk (2022) summarises "person-job fit" as being dependent on the characteristics of the individual and the job; the fit between the individual and job is a determining factor in individual outcomes in the workplace, specifically emotional, attitudinal, and behavioural outcomes. Person-job fit also refers to the congruence between an employee's skills, attitudes and needs and those required by the job; a proper fit leads to higher levels of work engagement and well-being (Akanni et al., 2020). On the other hand, research in the South African context has shown that work engagement

is a strong predictor of person-job fit over time and not the other way around (De Beer et al., 2016). Also, in a sample of participants from various South African organisations, Hall et al. (2022) aligned the concept of person-job fit with career congruence. They argue that when people enter a job and work in an incongruent environment, it could result in a potential cycle of entering and leaving jobs throughout their careers.

Similar to the conceptualisation of person-job fit by Saks and Ashforth (1997), student-course fit can be defined as students' perceptions of the extent to which their knowledge, skills and abilities match the requirements of their chosen courses of study in order to fulfil their ambitions and needs and enable them to do the kind of work for which they have been prepared by their studies in the labour market once they leave university. It has been argued that a good fit between a student and a specific course of study will leave students feeling academically, personally, and professionally successful and more engaged and increase the sense that they are fulfilling their academic, personal, and vocational goals (Freedman, 2013). Students who have considered their choices are also inclined to be more motivated and committed to their studies than those who may not have thought about their choices before making them (İlğan et al., 2018). Furthermore, students who perceive a good fit with their chosen courses of study have higher levels of vigour and dedication; there is also a mediating effect of student-course fit between strengths use, deficit development and engagement (Van Niekerk et al., 2016).

Lauri et al. (2011) argues that work fulfilment is vital for students' mental health and well-being; therefore, educational institutions should provide students with sufficient guidance before they choose a course of study. For HEIs to accurately identify students who do not perceive a good fit with their chosen courses of study, it is necessary to use an adequately validated measure to identify students who need assistance and proper career guidance. However, the Employment Equity Act 55 of 1998, Section 8 (Government Gazette, 1998) stipulates that psychological testing and other similar assessments are prohibited unless they have been scientifically proven to be valid and reliable, that they may not discriminate unfairly against any individual or group, and that it must be possible to use these measures in a reasonable and unbiased manner. Therefore, the psychometric validation of instruments is necessary to ensure that measures adhere to this legislative point of view, and in the university context as well.

Psychometric properties of a scale that measures students' perception of their fit with their courses of study in a valid, unbiased, equivalent and reliable manner have not been investigated in the South African higher education context. This study aims to test the appropriateness of a scale measuring student-course fit in the university context.

Literature Review

The well-known *Person-Job Fit Perceptions Questionnaire* (Saks & Ashforth, 1997) was adapted to the education context to measure *student-course fit* perceptions. The authors of this questionnaire designed four items to explicitly capture specific aspects of employees' perceptions of fit with their jobs.

Adapting work-related measures to the student context is becoming increasingly common. However, adapting work-related measures depends on the results of proper validation practices. Several psychometric properties should be investigated before using Western and adapted measures in the South African context. This study focused on structural validity, item bias, three types of measurement invariance (structural, measurement unit, and scalar), and internal consistency.

Structural validity is the degree to which the measurements of constructs conform to the assessment of the defined structure and demonstrate the internal structure of a construct (Koeske et al., 1994). The analysis for structural validity depends on the hypothesised relationships among variables and the extent to which inferences from scores on a test can be made concerning the construct of interest (Messick, 1993).

Item bias is an essential aspect of a test in a multilingual society such as South Africa. An item is biased when score differences do not occur based on actual differences in the measured underlying construct but because of anomalies at the item level. A poor translation of the item, ambiguity in the formulation of the item or low appropriateness of the item content to the different groups can be some of the causes of item bias (Van de Vijver & Tanzer, 2004).

Invariance (or equivalence) consists of various forms. *Configural invariance* (also known as structural equivalence) assesses the extent to which the factor structure of the measure can be replicated in the same way for different subgroups – that is, the factor structure has the same pattern and fits the data equally in all groups. *Metric invariance* refers to the equivalence of the item loadings on the factor(s) and indicates that each unit of measurement (i.e. each item) contributes equally to the latent construct across different groups. *Scalar invariance* tests if item intercepts are equivalent between groups – that is, if mean differences in the latent construct are captured in all the mean differences in the shared variance of the items (Byrne et al., 1989; Putnick & Bornstein, 2016).

Internal consistency can replicate a reliable result from different witnesses concerning coherence, stability, equivalence, and homogeneity (Mahembe et al., 2015). Reliability estimates are affected by numerous characteristics of the assessment environment, such as the type of instrument, administration method, rates, sample numbers, and statistical method (Golafshani, 2003).

Method

Research design

Since adapting the person-job fit scale of Saks and Ashforth (1997) to measure student-course fit is a new area of enquiry, it is important to use the most efficient method to provide initial evidence of the validity and reliability of the scale. For this purpose, the cross-sectional design is the most useful (Spector, 2019) and was used to collect data for this study.

Research participants and research procedure

A convenience sampling method of first-year students studying at a South African university was used (N = 1,211). Permission and ethical clearance were obtained from the participating university (ethics number: *University*-HS-2014-0165). A web-based survey with a secure link was placed on the HEI's online platform. The hyperlink was posted on specific course modules students from different campuses were required to take. Before completing the questionnaire, students were asked to complete an informed consent form. Participants were fully informed about the purpose of the study, the nature of their participation in the study, and other ethical aspects (e.g. voluntary participation, doing no harm, and confidentiality).

Participants were between the ages of 17 and 25, with most participants being 19 (40.1%) and 20 years old (22.0%). With regard to language, 29.0% spoke Afrikaans, followed by Setswana (18.0%), Sesotho (15.9%), English (7.3%) and other languages (28.7%). In total, 48.5% studied at campus 2, 36.3% at campus 3 and 12.2% at campus 1. The sample consisted of 63.9% female students and 35.3% male students.

Measuring instrument

Four items that measure *person-job fit* (Saks & Ashforth, 1997) were adapted to measure perceptions of student-course fit in the education context. Participants answered on a 5-point Likert-type scale with anchors 1 (to a very little extent) to 5 (to a very large extent). The items were adapted as follows:

Table 1: Adapted items of the Person-Job Fit Perceptions Questionnaire (Saks & Ashforth, 1997, p. 406) to the student context

Person-Job Fit original items	Student-Course Fit adapted items
Instruction: *The following questions are about your experiences related to your specific study course (e.g. B.Com Tourism, B.Ing etc.). Read each statement carefully and mark the answer that you think best corresponds to your own opinion or perception.*	
To what extent do your knowledge, skills, and abilities match the requirements of the job?	To what extent do your knowledge, skills, and abilities match the requirements of your study course?
To what extent does the job fulfil your needs?	To what extent does your study course fulfil your needs?
To what extent is the job a good match for you?	To what extent is your study course a good match for you?
To what extent does the job enable you to do the kind of work you want to do?	To what extent does your study course enable you to do the kind of work you want to do?

Statistical analysis

The latent variable modelling programme Mplus 8.6 was used (Muthén & Muthén, 2021) to analyse the data. Confirmatory factor analysis (CFA) was used to test the *structural validity* of the student-course fit scale. Maximum likelihood with robust standard errors (MLR) was used (Rhemtulla et al., 2012). The following specific fit indices were used: the likelihood ratio (chi-square, χ^2 statistic), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA) and the standardised root mean square residual (SRMR). For CFI and TLI, values higher than 0.95 indicate an acceptable fit (Brown, 2015). For RMSEA scores, a cut-off value between 0.50 and 0.80 is usually considered, with a score below 0.50 being considered the "golden rule of thumb" (Browne & Cudeck, 1993; Chen et al., 2008; Hu & Bentler, 1999; Steiger, 1989). For SRMR, a cut-off value of 0.05 was considered (Browne & Cudeck, 1993; Hu & Bentler, 1999).

Multi-group analysis and differential item functioning (DIF) for language (Afrikaans, Setswana, Sesotho and English), campus (three different campuses) and gender (male and female students) were determined using the *lordif* package (Choi et al., 2011) in *R*Studio (https://www.rstudio.com/). DIF is used to determine the presence of item bias (Sireci & Rios, 2013). Uniform bias occurs when the likelihood of similar responses for one group is systematically higher or lower at specific ability levels compared to other groups. Non-uniform bias occurs when the difference in the likelihood of similar answers across groups is not the same across all ability levels (Swaminathan & Rogers, 1990; Teresi & Fleishman, 2007). The following models were used and compared using ordinal logistic regression to generate three likelihood-ratio χ^2 statistics (Choi et al., 2011):

$$\text{Model 0 : logit } P(u_i \geq k) = \alpha_k$$
$$\text{Model 1 : logit } P(u_i \geq k) = \alpha_k + \beta_1 \star \text{ability}$$
$$\text{Model 2 : logit } P(u_i \geq k) = \alpha_k + \beta_1 \star \text{ability} + \beta_2 \star \text{group}$$
$$\text{Model 3 : logit } P(u_i \geq k) = \alpha_k + \beta_1 \star \text{ability} + \beta_2 \star \text{group} + \beta_2 \star \text{ability} \star \text{group},$$

When logistic models 1 and 2 (χ^2_{12}) are compared, $p < 0.01$ indicates uniform DIF. Non-uniform DIF is indicated by a significant difference between models 2 and 3 (χ^2_{23}). The total bias is indicated when comparing models 1 and 3 (χ^2_{13}) (Choi et al., 2011). Configural invariance tests for similar factor structures, metric invariance tests for similar factor loadings, and scalar invariance tests for similar intercepts (Preti et al., 2015) were tested using the same language, campus and gender groups used to test item bias. Internal consistency was determined using Cronbach's coefficient alpha, with values higher than 0.70 generally considered reliable (Nunnally & Bernstein, 1994). In addition, MacDonald's omega was also considered and calculated in the CFA framework, which has been shown to provide a more accurate approximation of internal consistency (Dunn et al., 2014). Reliability coefficients ≥ 0.80 indicate good internal consistency (Kline, 2015).

Results

Structural validity

The results of the CFA showed that a one-factor structure of the student-fit scale fitted is a good fit to data (χ^2 = 4.091; *df* = 2; CFI = 0.994; TLI = 0.983; RMSEA = 0.041; SRMR = 0.016). All items show acceptable and statistically significant factor loadings. Table 2 shows the results of the items' standardised factor loadings (λ).

Table 2: Standardised factor loadings for the latent variables of the student-course fit scale

Item	Item text	Loading (λ)	S.E.	p
Item 1	To what extent do your knowledge, skills, and abilities match the requirements of your study course?	0.656	0.038	0.000
Item 2	To what extent does your study course fulfil your needs?	0.809	0.030	0.000
Item 3	To what extent is your study course a good match for you?	0.841	0.026	0.000
Item 4	To what extent does your study course enable you to do the kind of work you want to do?	0.731	0.035	0.000
S.E. = standard error; all *p*-values < 0.001				

Item bias

The results of the DIF analyses for language, campus, and gender groups are presented in Table 3.

Table 3: Summary of the DIF analyses for the student-course fit scale

Group	Item	χ^2_{12}	χ^2_{13}	χ^2_{23}	β_1	R^2_{12}	R^2_{13}	R^2_{23}
Language	Item 1	0.7645	0.5976	0.3291	0.0005	0.0006	0.0025	0.0019
	Item 2	0.1054	0.1485	0.3412	0.0117	0.0029	0.0044	0.0016
	Item 3	0.0130	0.0655	0.7844	0.0109	0.0051	0.0056	0.0005
	Item 4	0.2293	0.1985	0.2344	0.0013	0.0021	0.0042	0.0021
Campus	Item 1	0.9784	0.9331	0.6717	0.0002	0.0000	0.0004	0.0004
	Item 2	0.0000	0.0001	0.4483	0.0224	0.0102	0.0110	0.0008
	Item 3	0.3087	0.0580	0.0338	0.0018	0.0011	0.0044	0.0033
	Item 4	0.3866	0.1166	0.0643	0.0031	0.0009	0.0035	0.0026
Gender	Item 1	0.0862	0.0803	0.1474	0.0029	0.0014	0.0024	0.0000
	Item 2	0.4054	0.6983	0.8720	0.0004	0.0003	0.0003	0.0000
	Item 3	0.1205	0.2964	0.8830	0.0055	0.0011	0.0011	0.0000
	Item 4	0.3926	0.5373	0.4745	0.0018	0.0003	0.0006	0.0000

χ^2_{12} = chi-square of model 1 compared to model 2; χ^2_{13} = chi-square of model 1 compared to model 3; χ^2_{23} = chi-square of model 2 compared to model 3; β_1 = change in beta coefficient; R^2_{12} = pseudo-McFadden $R^2$of model 1 compared to model 2; R^2_{13} = pseudo-McFadden $R^2$of model 1 compared to model 3; R^2_{23} = pseudo-McFadden $R^2$of model 2 compared to model 3

There were no significant differences between the four tested items for language and gender groups. However, this was not the case for the three campuses. The results in Table 3 and Figures 1 and 2 show significant differences for item 2 across campuses.

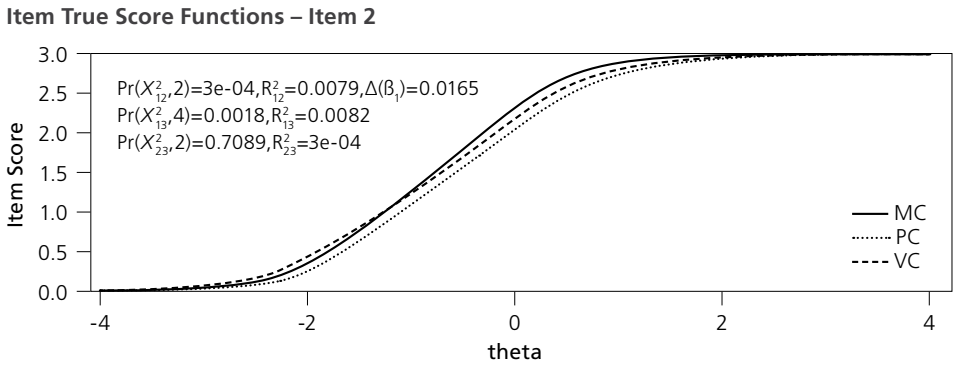

Figure 1: Item true score functions of item 2.

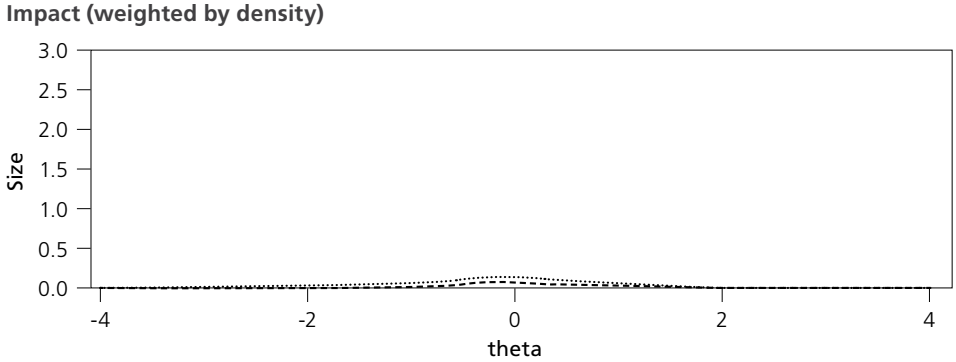

Figure 2: Impact (weight by density) of item 2

As shown in Figure 1, the plots for item 2 show statistically significant uniform DIF, $Pr(\chi^2_{12})<0.001$. The likelihood ratio χ^2_{13} was also significant. Because the likelihood ratio χ^2_{23} was non-significant. This suggests that DIF was primarily uniform bias. However, this effect was practically insignificant because McFadden's R^2 change for uniform DIF was 0.008 (a negligible effect size, Cohen, 1988). It is also clear that few subjects have the trait level in this population, as seen by the density-weighted impact (Figure 2).

Measurement invariance

Measurement invariance was tested between the different language, campus, and gender groups. As Putnick and Bornstein (2016) describe, metric and scalar invariance was tested to determine if the dimensions are invariant across the different groups. The results are shown in Table 4.

Table 4: Summary of measurement invariance analysis for the student-course fit scale

Group		χ^2_{12}	*df*	CFI	ΔCFI	RMSEA	ΔRMSEA
Language	Configural	17.93	4	0.982	–	0.076	–
	Metric	25.32	7	0.976	-0.006	0.066	-0.010
	Scalar	31.97	10	0.971	-0.005	0.060	-0.006
Campus	Configural	14.20	6	0.988	–	0.059	–
	Metric	18.34	12	0.991	0.003	0.047	-0.012
	Scalar	29.44	18	0.984	-0.007	0.040	-0.007
Gender	Configural	13.51	8	0.992	–	0.057	–
	Metric	22.63	17	0.992	0.000	0.039	-0.018
	Scalar	39.14	26	0.981	-0.011	0.049	0.010
	Partial scalar	33.69	25	0.987	-0.005	0.040	0.001

χ^2 = chi-square; *df* = degrees of freedom; CFI = Comparative fit index; ΔCFI = delta (change in) CFI; RMSEA = Root mean square error of approximation; ΔRMSEA = delta (change in) RMSEA

Regarding *configural* and *metric invariance*, it can be seen in Table 4 that the scale is invariant across the different language, campus, and gender groups, with CFI scores above 0.95. However, based on the DFI change, the results show that scalar invariance exists for language and campus groups, but not for gender (with ΔCFI = -0.011, just above the cut-off point and ΔRMSEA = 0.018 slightly above 0.015). A ΔCFI value higher than 0.01 between two nested models indicates that the added group constraints have led to a poorer fit; in other words, scalar invariance has not been achieved, and the more constrained model was rejected (Chen, 2007; Cheung & Rensvold, 2002; Preti et al., 2015). It was, therefore, meaningful to free one of the intercepts (item 2 in the Afrikaans group), resulting in an acceptable change in CFI and RMSEA and partial scalar invariance achieved (Vandenberg & Lance, 2000).

Internal consistency

As a measure of internal consistency, Cronbach's alpha coefficient was calculated. A Cronbach's alpha coefficient of 0.87 showed acceptable internal consistency ($\alpha \geq 0.70$) for the study course fit scale (Nunnally & Bernstein, 1994). McDonald's omega (ω) was 0.84, indicating good internal consistency (Kline, 2015).

Discussion

This study assessed the psychometric properties of a short measure for South African first-year students' perceptions of fit with their courses of study (i.e. student-course fit). The following was examined: structural validity, item bias (differential item functioning), measurement invariance (including configural, metric and scalar invariance) and reliability.

The results for the structural validity show that a one-factor structure fits the data. The statistically significant factor loadings (λ) ranged between 0.65 and 0.84, which is considered acceptable. In practical terms, this implies that the test's actual (empirical) structure matches the theoretical structure of the test and that student-course fit can be measured with this scale as only one dimension. The significant factor loadings (or items/questions asked to the participants) show how student-course fit can be interpreted, as measured with this scale. Therefore, when using this scale, student-course fit refers to (1) the perception that students have that their course of study fits their knowledge, skills, and abilities, (2) fulfils their career-related needs, (3) is a good match for them, and (4) enables them to do the kind of work they someday want to do.

In universities with multilingual students, it is of the utmost importance to ensure that measures are fair to use for different language groups and that students understand the questions of a measure in an identical manner (Schaap, 2011; Van De Vijver & Rothmann, 2004). Item bias typically occurs when items are ambiguous, formulated with difficulty, or when the content is not appropriate or familiar in a particular cultural context (Van De Vijver & Rothmann, 2004). This study utilised differential item functioning to determine uniform and non-uniform bias. Items were not biased for different languages or gender groups. Although statistically significant uniform item bias was detected for item 2 ("To what extent does your study fulfil your needs?") for different campuses, the effect size, and therefore the practical impact, was negligible (Choi et al., 2011; Cohen, 1988). Therefore, score differences were found to be similar between groups, the formulation of items were appropriate for different groups, and no practical anomalies were detected at an item level (Van de Vijver & Tanzer, 2004). This shows that male and female students, students from different campus groups, and students from different language groups included in this study understood the items in the same way and that, based on the results from this sample, the student-course fit scale can be applied fairly to these groups.

It is also essential to test if a construct (in this case, student-course fit) can be interpreted and understood similarly across different groups (Van de Schoot et al., 2012). In this study, it was tested whether (1) meaningful comparisons can be made between different groups (configural invariance), (2) students in different campus and language groups understand the construct in the same way (metric invariance), and (3) a test score on the scale is interpreted in a similar way against different cultural backgrounds (He & Van De Vijver, 2012). The scale demonstrated configural and metric invariance for the different language, campus, and gender groups, indicating that the factor structure and item loadings are similar between different groups. Although full scalar invariance was confirmed for language and campus, partial scalar invariance was found for gender groups after releasing the intercept of item 2 in the Afrikaans group. This indicates that the intercept of item 2 was not invariant for the Afrikaans group; therefore, the mean difference in the student-course fit construct is not captured in the shared variance of this item (Putnick & Bornstein, 2016). This result should be interpreted with caution since the value of $\Delta CFI = -0.011$ was *slightly* above the cut-off point of 0.01 (Shi et al., 2019).

Reliability is the degree of consistency of a measure. In this study, Cronbach's coefficient alpha coefficient ($\alpha = 0.87$) and McDonald's omega ($\omega = 0.84$) were calculated and showed sufficient reliability of the scale. Therefore, the study-course fit scale has proven to be reliable in this study and would produce the same repeated results when administered under the same conditions.

Practical Implications

In South Africa, there is a great need for accessible career guidance services for all students, including first-year university students. However, many students, specifically from less-resourced settings, do not have access to teachers or career counselling services (Sefotho, 2017). As a result, many students enter university and register for a course of study that does not fit their vocational goals and aspirations. The findings of this study provided preliminary evidence of a valid and reliable short scale that universities can use to identify students who perceive a mismatch between themselves and their chosen courses of study. Identifying students who are unsure about their courses of study could assist policymakers and career counselling services in designing intervention programmes to assist these students in their career decision-making processes. Many students are not aware that such services exist. Therefore, counsellors in the university system need to reach out to these students, enabling them to participate in programmes offered by the university, directing them to align their chosen fields of study with their knowledge, skills and abilities and the needs of the labour market and the broader South African economy. Therefore, first-year students can be supported in the complex process of planning an appropriate career path and become more proactive in career decision-making (Jemini-Gashi et al., 2021; Oberrauch et al., 2021).

Limitations and Recommendations

Only first-year students participated in this study. Future research should include students from other academic year groups since they may also experience a mismatch with their chosen courses of study. Only students from one South African university were used; therefore, future studies should replicate these findings in different South African universities. Although this study included language groups most represented at the participating university (Afrikaans, Setswana, Sesotho and English), future studies should include an equal representation of all South African language groups.

Future research could examine the items of the scale more closely. For example, the first question reads: "To what extent do your knowledge, skills, and abilities match the requirements of your study course?". Although this is in line with the original item of the person-job fit questionnaire of Saks and Ashforth (1997), this is a triple-barrelled question, asking participants about their knowledge, skills, and abilities (i.e. three different constructs). Such questions could leave participants unclear about what is being asked and unsure how to respond (DeVellis, 1991). Future studies can explore the option of formulating three different questions for each of these three constructs and refine the scale accordingly.

Additional validity evidence should be obtained concerning the convergent and predictive validity of the scale. The concept of study-course fit could be related to career self-efficacy. For example, youth with higher levels of career self-efficacy are more likely to make career-focused preparations and persevere in pursuing their vocational goals (Bandura et al., 2001). Regarding predictive validity, there is some evidence that perceptions of the fit with study courses of first-year students are related to study engagement and the proactive behaviour of using one's strengths and developing one's weaknesses (see Van Niekerk et al., 2016). However, it is necessary to determine the predictive value of study-course fit on outcomes such as academic performance, intention to leave the university and study commitment. For example, based on a recent study on the conceptualisation of commitment in South Africa, there could be multiple types of commitment to consider (Van Lill et al., 2020). The same authors included considerations for cognitive conviction in the importance and practicality of a study course, positive feelings and dedication to a course, and a willingness to do more than required to pursue a course of study.

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