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The Interface between Self-Determination Attributes and Inclusion: A Cross-Sectional Survey of Secondary School Students in Uganda

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Abstract:
This study examined the interface between self-determination attributes and inclusion in secondary education in Uganda. We examined the interface between the attributes of self-determination (perceived autonomy, Competence and relatedness) and inclusion of learners with and without special educational needs in secondary education. Data was collected using closed ended self-administered questionnaires from 309 students. Data was analyzed using statistical package for social scientist (SPSS) version 25.0. Results showed that there was a moderate positive statistically significant relationship between self-determination attributes and inclusion (r=. 409, P<0.01). The table also shows that all the attributes of self-determination had a moderate positive statistically significant relationship with inclusion; Perceived autonomy satisfaction (r=. 318, P<0.01), Perceived competence satisfaction (r=. 346, P<0.01) and Perceived Relatedness satisfaction (r=. 336, P<0.01). This implies that there is a positive interface between all the attributes of self-determination and inclusion of learners in secondary education in Uganda. Results of multiple regression analysis show that 57% of the variance on inclusion could be attributed to the elements of self-determination namely; perceived autonomy satisfaction (P=. 002 B=. 523 t=2.263), Perceived competence satisfaction (P=. 007 B=. 563 t= 2.263) and Perceived Relatedness satisfaction (P=. 004 B=. 693 t= 2.692). The above results show that perceived autonomy satisfaction and perceived relatedness satisfaction were the only statistically significant predictors of inclusion. Interventions aimed at improving inclusion should therefore emphasize development of autonomy and relatedness as psycho-educational interventions.

Keywords: Self-determination, Attributes, Inclusion

INTRODUCTION

The population of regular secondary schools has become more diverse over the past 30 years, the diversity of the completion rate has remained low, possibly as a result of the low enrollment of students with special needs in regular secondary schools (Ainscow, 2020). International funding agencies and government ministries have become fixated on increasing the number of students with special educational needs in inclusion under the banner of achieving inclusion excellence in recent years. Significant inclusion in secondary education requires changes at many levels, from the individual student to the school as an institution, and should involve a variety of stakeholders, according to research and practice (Parents, teachers, PTA, BOG, Administration, religious/cultural leaders, community around the school, Policy makers, NGOs and funding agencies). The conceptual conundrum around inclusion, which makes it challenging to have an

accurate assessment of its effectiveness, exacerbates these difficulties (Slee, 2018; Metcalf et al, 2018; Ainscow, 2020). Furthermore, a large number of inclusive schools are managed by educators and administrators who are not proficient in the fundamentals of inclusion and special education (Metcalf, Russell, Hill, 2018).

According to research on inclusion, interventions aimed at fostering and developing self-determination qualities are crucial in deciding how learners, especially those with special educational needs perform and flourish in an inclusive environment (Farrar, 2021). Van den Broek et al (2016) define self-determination in terms of six indicators:, autonomy, freedom barriers, and facilitators; decision making; social skills; self-confidence; autonomy; and Ryan and Deci (2000, 2017) observed that self-determination is a psychological construct that they operationalized to mean autonomy, competence, and relatedness, contending that the belief that these psychological needs are met essentially determines a learner's inclusion or exclusion in the educational system (Cuming et al, 2020;Ryan &Deci, 2017).

The present study will be guided by Ryan and Deci (2000) conceptualization of self-determination as a basic psychological construct manifesting as autonomy, competence and relatedness and how these psychological needs contribute to learners' inclusion.

Conceptual Clarifications

Inclusion:

The idea and viewpoint of inclusion gained global consideration when the United Nations promoted the idea of Education for all at the world conference on Education for all in Thailand in 1990. Furthermore, a policy statement on inclusive education originating from 1994 Salamanca conference in Spain contested all Nations, schools and educators to deliver applicable education for all students including those with special needs (Engelbrecht, 2020; Asamoah et al, 2018;). These frameworks noted that providing all students in regular education classes with high quality instruction and support is a guarantee of inclusive education because inclusion has respectful school culture where students' educational needs are supposed to be accomplished, helped to develop positive relationship with peers, and are full contributing members of the school community (Vorapanya & Dunlap, 2014; Asamoah et al 2018)

The term inclusion has given rise to global scholastic deliberations, involving a mixture of various and conflicting viewpoints and as such, the term inclusion remains controversial, deficient of a conceptual application (Liasidou, 2012) and because of this distinct assortment of connotations and ambiguities, inclusion can be portrayed as a "semantic Chameleon" (Liasidou, 2012). According to Slee (2018) the definition of inclusion falls into two categories namely; those who detail features of inclusion (Loreman 2009) and those who identify and describe barriers to inclusion that must be removed (Ainscow et al, 2013; Ainscow 2015), to Slee (2018) this has led to delineation of inclusion as lacking a conceptual focus. To him therefore inclusion refers to securing and guaranteeing the right of all children to access, presence, participation and academic achievement in their local regular schools (Slee 2018), to this end therefore, Slee argues that inclusion calls upon neighborhood schools to build their capacity to eliminate barriers to access, presence, participation and achievement in order to be able to provide excellent educational experience and outcomes for all children and young people. Similarly, other scholars define inclusion as a continuous process of increasing the presence, participation and achievement of all learners and young people in local community schools (Qvortrup & Qvortrup 2018). Others have defined Inclusion as educational system that enhances access, participation and Outcomes for all

diverse student population who have been traditionally excluded from formal education (Kozleski et al, 2014; Li & Ruppar, 2020)

Studies have revealed that since there is no uniform definition of inclusion measuring its success becomes problematic (Schwab, Sharma & Loreman, 2018; Slee 2019). To Schwab et al, (2018) it is arduous to query the efficacy of inclusive education system since every nation seems to have their own definition. However, they mention some of the attempts that have been made to measure inclusion for instance the efficacy of inclusive educational system was measured in terms of number of students considered as having additional needs accessing mainstream classrooms, Identifying the academic outcomes for these students and investigating the well-being of the school (Schwab et al 2018). Other studies have noted that measuring inclusion is a notion that is difficult to quantify arguing that in order to measure something one must first know what it is that is to be measured (Anderson & Boyle, 2015). They note that most definitions of inclusion do not itemize the constructs of inclusion and this makes it impossible to measure inclusion (Anderson & Boyle 2015). They argue that most studies that have attempted to measure diverse constructs of inclusion from different viewpoints such as Teacher attitudes, Teacher efficacy (Boyle, Topping & Jindal-Snape, 2013; Boyle, Topping, Jindal-snape & Norwich, 2012; Hoskin, Boyle & Anderson, 2015) even if Valid within their own countries, cannot be accurately the principle for the education of all students who are in various countries with varied definitions.

Loreman (2014) attempted to overcome these challenges in his proposal to measure inclusive education through the lens of its outcomes rather than trying to measure the construct itself. He identified the areas of Participation, Student achievement and post school outcomes as being valid measures of Inclusive education success. Loreman's Idea is currently used in Canada and Australia to measure the success of inclusive education (loreman, 2014). While Cox (2016) noted that to measure success of inclusion focus should be on, Access to education, Access to Quality Education and Access to Success in Learning. He emphasized Access as an important determinant of any inclusive educational system because inclusion underscores Access to education for all learners. UNESCO (1990) noted that while other education laws and policies allude to or mention Inclusive education, they often fail to define the construct. Regrettably the ambiguity and range of Inclusive education definitions make inclusive Education challenging to conceptualize, operationalize and measure in schools, a view (Slee, 2019) also share. These challenges slow the trajectory of effective inclusive education practices (Miles & Singal, 2010).

According to Slee (2011) since there are challenges in definition of inclusive education world over there is no need to focus on finding a definitive definition for inclusion to the abolition of restricted educational practices but rather focus should be placed on the inclusion matrix as stipulated in the Salamanca statement and as such the success or failure of inclusion can be assessed by interrogating the issue of Access to school and classrooms, Presence of learners in school and classes, participation of all learners school , Academic Achievement and social outcomes from school (Slee, 2011, 2018)

This study adopted the definition and operationalization of Inclusion based on (Slee, 2018) inclusion refers to securing and guaranteeing the right of all children to access, presence, participation and academic achievement in their local regular schools. The study will also Measure the efficacy of Inclusion in Uganda based on Slee (2011,2018) Measures looking at the Inclusion Matrix namely Access, Presence, Participation and Academic achievement. The inclusion matrix

as a measure of the success of inclusive education systems have been widely adopted and used by scholars in many African countries (Zimbabwe, South Africa and Kenya).

Self-Determination Attributes

Self-determination is an entrenched theoretical framework in educational psychology, which states that an individual learner's inner motivation is strongly interconnected with the perceived satisfaction of three specific psychological needs or attributes namely; Autonomy, Competence and Relatedness (Ryan & Deci, 2000; 2017). Self- determination has been refered in literature as a psychological construct because of the satisfaction associated with the psychological needs in that the more the learner perceives that his/her psychological needs (autonomy, competency and relatedness) are met, the more internally they will be motivated in that particular situation (Ryan & Deci, 2017).

Autonomy refers to the need to feel self-endorsed and engaged in activities willingly and is met when motivation for one's action is determined from volitional factors and not controlled either internally or externally (Ryan &Deci, 2017). Studies have shown that a learner's psychological need for autonomy in learning is conceptualized as the degree of control someone perceives they have over their learning environment. It is considered a difficult need to satisfy because it demands more attention from the teacher by providing students with multiple options from which they can choose (Ryan& Deci, 2000). Autonomy varies from individual learner to another because it takes the form of our likes, dislikes, past experiences and environmental and social context (Ryan & Deci, 2007). Because of the complexity of autonomy as a psychological need research suggests that providing students more choices will lead to increase in persistence and resilience, which are major, attributes for successful inclusion (Ratelle, Guay, Vallerand, Larose, Senecal, 2007). Competency refers to the desire to have an effect on one's environment therefore a learner's psychological need for competency in learning refers to their perception that they have mastered a task (Ryan & Deci, 2006; Rodgers, Markland, Selzler, Murray, Wilson, 2014). Competency has been positively associated with interest in accessing learning and academic achievement which are important attributes for inclusion, therefore interventions targeting learners with low perception of competence have the potential to increase inclusion (Khalaila, 2015), perceived competence satisfaction has also been shown to be a statistically significant predictor of inclusion. Relatedness is being sensitive and responsive to others and is satisfied when learners feel that they belong to a school or community (Ryan &Deci, 2000). A learner's sense of relatedness is defined as a feeling of connection to another individual or group for instance if a learner feels that his homework is valued by others, they will feel a sense of connectedness (Ryan & Deci, 2017). Research has shown that perceived relatedness satisfaction is associated with ones level of participation in inclusion (Farrar, 2020) therefore interventions that increase students perception of relatedness satisfaction have been shown to improve health, participation and academic achievement which are basic constructs of inclusion, (Walton &Cohen, 2011) similarly relatedness satisfaction is correlated with autonomy, mastery goal orientation and performance goal orientation which are motivational goals (Kaufman & Dodge,2009).

We noted that although these studies show how to improve inclusion, they dwell so much on regular learner without special educational needs. Our study will examine all these attributes on all learners and determine how we can improve inclusion for all learners. The current study suggests that to achieve comprehensive inclusion changes need to take place at all levels starting from the individual learner, teachers, administration and the school.

The Interface Between Self-Determination and Inclusion

Literature is abundantly clear about the predictive role of self-determination attributes (Autonomy, Competence, Relatedness) on inclusion of all learners in inclusion (Ryan & Deci, 1985; 2000; Farrar, 2020; Howard et al, 2021; Wehemeyer et al, 2011). To Ryan & Deci (2000) perceived relatedness was greatly associated with inclusion of learners with visual impairment because they have better social skills and needed to interact with other learners cordially in order to guarantee their retention in inclusion while the other attributes of mastery was particularly more visible among learners without special educational needs while to Ryan and Deci (2000) all the three attributes (Autonomy, competence and relatedness) were significant predictors of learning for all learners in inclusion. To them, the perceived satisfaction of these psychological attributes fundamentally determines how the learner relates with his learning environment (relatedness), makes choices (Autonomy) and shows mastery and command of tasks (Competence), which are attributes which determine, access, participation and academic achievement in inclusion setting (Ryan &Deci, 2000).

Similarly, Farrar (2020) noted that the development and nurturing self- determination attributes must be incorporated into the teaching learning process since it significantly determines the success or failure of inclusion and that all learners must be trained to develop these attributes since they relate to socialization, participation and academic achievement. While for Luckner and Sebald (2004), they noted that lack of self-determination is associated with higher prevalence of mental disorders and maladaptive behaviors in persons with intellectual disability and mental retardation and Wehmeyer et al (2011) noted that students with mental retardation demonstrated more self-determination behaviors in resource rooms than in mainstream classes this is because they are more likely to feel more intimidated in mainstream classrooms (Wehmeyer et al, 2011). This therefore suggests that promoting the development of self-determination for learners with and those without special educational needs is considered the best educational practice worldwide because it is associated with desirable school and post school outcomes such as independent living, Quality of life, enhancing the ego, self-esteem, thinking, personal development and objective utilization of learners with special educational needs who face difficulties in socialization and poor performance in class (Shrogen et al,2015;Shrogen et al 2017). The present study contributes to the ongoing conversation on how to improve inclusion in Uganda by examining the interface between self-determination attributes and inclusion in Uganda. Most of the studies reviewed are Eurocentric and therefore alien to Ugandan situation. This study will illuminate the contribution of self-determination attributes as an individual learner's psychological resource which when tapped as a psycho-educational intervention will improve learners' resilience in inclusion and thereby increasing enrolment, retention and completion of all learners in inclusion.

- Ho: There is a statistically significant relationship between self-determination attributes and inclusion in secondary education in Uganda.

METHODS

Research Design

This study was purely quantitative in nature employing Cross-sectional survey research design to capture a representative sample of the population (Creswell, 1999). According to Cresswell, cross-sectional survey design involves collecting data from a representative sample at the same point in time; analyzing this data, and making generalization of the findings to the target population (Bougie & Sekaran, 2020). Using cross-sectional survey research design, the study derived

insights, opinions, and perception on self-determination attributes and inclusion of learners in secondary education in Uganda from students, parents, teachers and school administration. All data was collected at the same point in time.

Participants and Procedures

The study collected data from all-inclusive secondary schools in three Northern Ugandan districts (Gulu, Lira, and Arua) using a cross-sectional survey research approach. 309 secondary school students (61.8% men, 38.2% females) made up the sample; 63.8% of the pupils had disabilities, while 36.2% did not. The participants' disabilities were as follows: 18.8% had visual impairments, 17.2% had physical impairments, 13.6% had hearing impairments, 4.5% had deafness, 5.7% had blindness, and 4.0% had mental retardation. Based on the following criteria, these participants were included in the study: (1) all students with disabilities enrolled in the school; (2) regular students who have close friendships with students with disabilities or their companions; and (3) students from secondary schools that are inclusive. The secondary schools with special needs annexes that are designated as all-inclusive are those that are established regionally by the ministry of education and sport. Examples of such schools are Gulu High Secondary School in Northern Uganda, Nancy Secondary School in the Lango sub-region, and Nvara Secondary School in the West Nile region. Data was collected from those who met the above criteria with permission from the district education officer, school administration and active involvement of the department of special needs and inclusive education in the selected school.

Sample Size Determination

A multi-stage sampling strategy was used to determine the sample size (Cohen et al, 2018). We started by determining sample size from the unit of analysis i.e., the schools, this was followed by determining sample size from the unit of analysis (i.e., the students, instructors, head teachers, PTA, Board of Governors, DEO, DIS). Therefore, the study employed Krejcie and Morgan's (1970) sample size determination table to establish the sample size for a particular population. After the instruments were administered, 309 out of the 312 participants in the selected sample participated, yielding a response rate of 99%.

Table 1.0 Sampling Frame

Category	Population	Sample Size	Sampling Procedure
Schools	3	3	Purposive
Learners	320	175	Stratified random
Teachers	120	92	Simple Random
Support staff	25	24	Simple Random
Head teacher	3	3	Purposive
PTA	12	12	Purposive
DEO	3	3	Purposive
Total	**486**	**312**	

Source: Primary data

Sampling Technique

A concurrent sampling design was employed, combining purposive sampling with basic random sampling. While learners with special educational needs were selected using stratified random sampling (disproportionate stratified random sampling) based on their uniqueness, regular learners, teachers, and support staff were given equal chances of being selected using simple random sampling (lottery method) to ensure that the perspectives from the samples can be

generalized to the larger population (Cohen et al, 2018) and the head teachers, DEO and DIS were selected using purposive sampling. The advantage of stratified random sampling is that it gives all members of a particular strata an equal chance to be selected in the study (Bougie & Sekeran, 2020) for purposive sampling only, Head teachers PTA, District Special needs officers and District inspector of schools will be selected purposively because of their roles in special and inclusive education (Cohen et al, 2018)

Instruments and Measurements

Self-determination Attributes was measured using Basic psychological needs Scale (BPNS) by (Deci & Ryan, 2000) which comprised of (21) items with (4) items measuring Autonomy satisfaction, 4 items measuring Competency satisfaction and (4) items measuring relatedness satisfaction while the other (9) items measuring frustration with (3) items measuring Autonomy frustration, (3) measuring competence frustration and 3 items measuring relatedness frustration. This scale was modified to (9) items only measuring satisfaction by Samman (2007). These items have alpha estimates of reliability of 0.82 (Competence), 0.91(Autonomy) and 0.87(Relatedness). The items were scored on a five-point likert scale ranging from 1= Strongly Disagree, 2= Disagree, 3= neither disagree nor agree, 4=Agree and 5=Strongly Agree. The potential score ranges 18 to 90. Thus, the lowest score on each of the item indicated low satisfaction of psychological needs of Autonomy, Competence and Relatedness while higher scores on the instrument reflected high satisfaction of the psychological needs of Autonomy, Competence and Relatedness.

RESULTS

Table 1 shows show results of a correlation analysis of the interface between Self-determination attributes (Perceived autonomy satisfaction, Perceived Competence satisfaction and perceived relatedness satisfaction) and inclusion. Findings show that there is a moderate but positive statistically significant relationship between self-determination attributes and inclusion (r=. 409, P<0.01). The table also that all the attributes of self-determination had a moderate positive statistically significant relationship with inclusion; Perceived autonomy satisfaction (r=. 318, P<0.01), Perceived competence satisfaction (r=. 346, P<0.01) and Perceived Relatedness satisfaction (r=. 336, P<0.01). This implies that there is a positive interface between all the attributes of self-determination and inclusion of learners in secondary education in Uganda therefore we accept the Hypothesis Ho and conclude that the development self-determination attributes must be considered when programming for inclusion of all learners in secondary education.

Results from the multiple regression analysis showed that 57% of the variance on inclusion could be attributed to the elements of self-determination namely; perceived autonomy satisfaction (P=. 002 *B*=. 523 t=2.263), Perceived competence satisfaction (P=. 007 *B*=. 563 t= 2.263) and Perceived Relatedness satisfaction (P=. 004 *B*=. 693 t= 2.692). The above results show that perceived autonomy satisfaction and perceived relatedness satisfaction were the only statistically significant predictors of inclusion. Interventions aimed at improving inclusion should therefore emphasize development of autonomy and relatedness as psycho-educational interventions.

Finally, the P-P results show that both self-determination and inclusion have normal distribution justifying choice and use of parametric tests (Pearson product moment correlation coefficient at Bivariate level and multiple regression analysis at multi-variate level of analysis regression in processing data for this study.

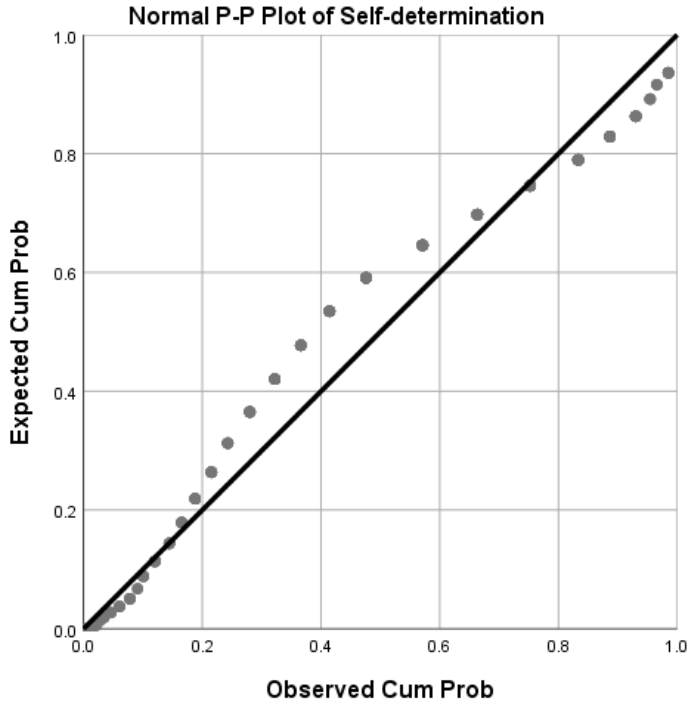
Correlations						
		Level of inclusion	Self-determination	Perceived autonomy satisfaction	Perceived competence	Perceived relatedness
Level of inclusion	Pearson Correlation	1	.409**	.318**	.346**	.336**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	309	309	309	309	309
Self-determination	Pearson Correlation	.409**	1	.816**	.839**	.784**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	309	309	309	309	309
Perceived autonomy satisfaction	Pearson Correlation	.318**	.816**	1	.528**	.442**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	309	309	309	309	309
Perceived competence	Pearson Correlation	.346**	.839**	.528**	1	.507**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	309	309	309	309	309
Perceived relatedness	Pearson Correlation	.336**	.784**	.442**	.507**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	309	309	309	309	309
**. Correlation is significant at the 0.01 level (2-tailed).						

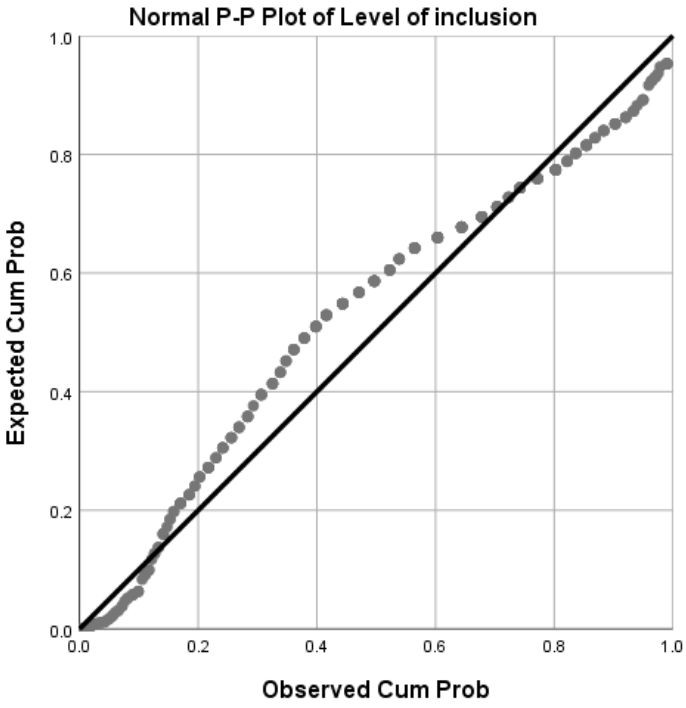
Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410[a]	.168	.565	18.88893
a. Predictors: (Constant), Perceived relatedness, Perceived autonomy satisfaction, Perceived competence				

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22041.781	3	7347.260	20.593	.000[b]
	Residual	108821.469	305	356.792		
	Total	130863.249	308			
a. Dependent Variable: Level of inclusion						
b. Predictors: (Constant), Perceived relatedness, Perceived autonomy satisfaction, Perceived competence						

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	100.090	7.837		12.771	.000
	Perceived autonomy satisfaction	1.001	.442	.523	2.263	.002
	Perceived competence	1.252	.464	.563	2.698	.007

	Perceived relatedness	1.411	.482	.693	2.925	.004
a. Dependent Variable: Level of inclusion						





DISCUSSIONS

The study sought to establish the interface between self-determination attributes and inclusion of learners in secondary education in Uganda. It has been suggested that Self-determination attributes is a fundamental determinant of inclusion of all learners in secondary education (Ryan &Deci, 2000). In this study we argue that self-determination attributes are an important

determinant of inclusion for learners in inclusion. We noted that the self-determination attributes of autonomy, competence and relatedness was an antecedent to enhanced inclusion of all learners in inclusion.

We hypothesized that there was a significant relationship between Self-determination attributes and inclusion of all learners in inclusion. Results showed that there was a moderate positive statistically significant relationship between self-determination attributes and inclusion of all learners in secondary education in Uganda. These findings are supported by studies by Ryan and Deci (2000) who noted that for inclusion of all learners in education there was need for the school system to deliberately program development of self-determination attributes (Autonomy, Competence and Relatedness) as a key psycho-educational intervention to improve inclusion. To them, learners with special educational needs are gifted differently and therefore require customized intervention that caters for their uniqueness. Similarly, a study by Shrogen et al (2015) showed that relatedness and autonomy was positively related to inclusion of learners with special educational needs while Farrar (2020) posits that for inclusion to succeed learners perceived competence satisfaction was fundamental. Other studies have noted that self-determination is key to the success of inclusion for all learners at all learners of education (wehemeyer &Kingston, 2013; Clark et al, 2014; Zhang, 2001).

Results from the multiple regression analysis showed that 57% of the variance on inclusion could be attributed to the elements of self-determination namely; perceived autonomy satisfaction (P=. 002 *B*=. 523 t=2.263), Perceived competence satisfaction (P=. 007 B=. 563 t= 2.263) and Perceived Relatedness satisfaction (P=. 004 *B*=. 693 t= 2.692). The above results show that perceived autonomy satisfaction and perceived relatedness satisfaction were the only statistically significant predictors of inclusion. This is in agreement with Shrogen et al (2015) who emphasized the development of autonomy and relatedness as a necessary psycho-educational intervention to improve inclusion. Similarly, studies by Zhang (2001), Farrar (2021) and Moore et al (2020) articulated succulently the role of self-determination attributes to inclusion.

CONCLUSION

We concluded that learner's self-determination attributes (Autonomy, competence and relatedness) are essential for the realization of inclusion in secondary education in Uganda. Therefore, Learner's self-determination attributes are the best psycho-educational crucial to improve inclusion in secondary education in Uganda. All the attributes of self-determination should be emphasized.

RECOMMENDATIONS

Inclusive school systems should emphasize the development of learner's self-determination attributes (autonomy, competence and relatedness) for all learners by incorporating it in the curriculum and co-curriculum activities. The counseling and guidance departments in inclusive schools should also be empowered with specialized counselors and program for routine counseling and guidance.

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COMPLIANCE WITH ETHICAL STANDARDS

The Uganda national council for science and technology and Gulu University research and ethics committee approved this research no: (GUREC-2023-523)

CONFLICT OF INTEREST

The authors declare no conflict of interest

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