VALIDATION OF GOAL SETTING, DECISION-MAKING SKILLS AND LEARNING SATISFACTION SCALE AMONG DISTANCE AND CONVENTIONAL UNIVERSITY LEARNERS IN NIGERIA

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Abstract

The researcher modified a 13-item scale to measure goals setting, decision-making skills and learning satisfaction among distance and conventional university learners in Nigeria. The scale was initially developed by Mind tools, a website developer for general measurement. The validation sample was 187 males and 171 females. Exploratory factor analysis indicated that the scale measures four distinct dimensions: decision-making skills (DMS), goal setting skills (GSS), formulating learning goals (FLG) and learning satisfaction (LS). The sub-scale is brief (3 to 4 items each) and demonstrate good psychometric properties. Cronbach's alpha ranged from .79 to .90 across the four subscales. Criterion-related validity was demonstrated for each subscale. DMS was higher for distance university learners than conventional university learners; GSS was higher among distance university learners than conventional university learners; FLG was higher also among distance university learners than conventional university learners and LS was higher among conventional university learners than distance university learners. The scale was developed to support goal setting, decision-making skills and learning satisfaction among undergraduate university learners and it is potentially useful for both distance and conventional university learners.

Keywords: *Goal setting, decision-making skills, learning satisfaction, distance and conventional learners*

Introduction

The rate of enrolment into different programmes in both distance and conventional universities in Nigeria has increased tremendously over the last twenty years (Tanglang & Aminu, 2014). The rate of completion by learners

in these programmes however continues to be a course of concern to professionals, parents, experts and even the students themselves.

Many of the learners don't realise the importance of setting goals and executing the set goals with effective decision-making strategies that will guide their learning activities. One of the observations made by Tanglang & Aminu (2015) was that many of the university undergraduate learners who were able to set realistic and attainable goals still lack the appropriate decision-making skills as it s to carrying out the set goals. Goals may be generally formulated by some of the learners but relating the general goal to learning requires another skills and guidance from the experts. The roles played by formulating achievable goals are vital to distance or conventional university learners' academic success and achievements in life (Okopi & Aminu, 2014). Strategies for executing achievable goals will automatically depend on a foundation of possessing effective decision making and developing effective decision-making skills. When learning goals are formulated by a learner, it must be carried out with efficient decision-making skills (Aminu & Gali, 2012). Education and Counselling psychologists believed that developing scales for measuring learner's levels of goal settings, decision-making skills and learning satisfaction are some of the basic ways of diagnosing learner's academic problems, learning or cognitive styles. These are important if there must be successful academic performance and achievement (Shertzer & Stone, 1976; Okon, 1983; Saka, 2006; Sambo, 2008, and Aminu & Gali, 2012).

A number of existing tests separately measures goal setting, decision-making and learning satisfaction (Mindtools, 2014 a & b; Campbell, 2005 and Campbell, 2004) but a review of the tests did not show any currently available instruments which could validly and reliably measure distance and conventional undergraduate learner's level ofgoal setting, decision-making and learning satisfaction. Among tests reviewed Mindtools scales (2014) that separately measures goal setting and decision-making skills appear to come closest. However, the two scales were developed to measure individuals' general goal setting and decision-making skills without making reference to the learning goals and learner's levels of learning satisfactions.

Therefore, conscious efforts must be made to develop measuring scale that will be supportive by jointly measuring goal settings and decision-making

skills and learning satisfaction among distance and conventional university learners in Nigeria. This group of learners might be finding it difficult to realise and link the variables together and also learners who may be diagnosed to be performing academically low or intend to abandon their programme, withdraw from programme or failed to graduate at appropriate time due to the factors of goal setting and decision-making skills. The goal of the present study was to develop a test that will be used to jointly identify learners whose level of goal setting is poor, ineffective decision- making skills or dissatisfied with learning so as to serve as basis for counselling.

Method
The study is an exploratory factor analysis research.

Sample, Selection and Characteristics
The sample consisted of one hundred and eighty-seven (187) males representing 52.23% and one hundred and seventy-one (171) females representing 47.77%. Mean age was 20 years, one hundred and seventy-nine (179) learners representing 50% were from distant university learners, and another one hundred and seventy nine (179) learners representing 50% from conventional university. Learners area of specialisations include: Sciences (79=22.07%), social sciences (101=28.21%), arts/administration (89=24.86%), and education (89=24.86%). The sampling technique used was purposive based on the nature of the investigation.

Method of Data Analysis
Frequency counts, percentages, correlation statistics with exploratory factor analysis was used in analysing the data collected for the study.

Instrument Development
The researcher developed 32 items, 8 per factor, covering four factors. Student counsellors, test experts and psychologists reviewed the items and were necessary suggested modifications. Each item were rated on a 4- point scale from strongly disagree with a rating of 1, disagree 2, agree 3 and strongly agree 4 points. The four sub-levels of the scale were:
1. Goal setting skills (GSS): Formulation of goals, whether distance or conventional learners.
2. Decision-making skills (DMS): Developing decision-making strategies.

3. Formulating learning goals (FLG): Learners having formulated learning goals.
4. Learning satisfaction (LS): Satisfaction with the learning performances.

Item Selection

Because the researcher wanted to create brief items scale so, fewest items possible without compromising adequate internal consistency (a 70). The researcher eliminated items which sounded very similar to other items and items with significant amounts of missing data. Using factef, analytic techniques, and the researcher chose items, so that four distinct factors emerged, removed items which correlated with scales other than their own. Thirteen items were retained for the final instrument validation.

Data Collection Procedure

The scale copies were distributed to learners representing National Open University of Nigeria (distance learning university) and University of Lagos (conventional university) by the researcher with the assistance of student counsellors in two study centres of the National Open University of Nigeria, Lagos and two counselling psychologists in the Faculty of Education, University of Lagos. All the learners were selected from the 2015 academic session. Learners that participated were in the third year of their undergraduate academic programmes.

Results

Table 1: The Scale Characteristics

Scale	N	No. of items	Cronbach' alpha	Mean	Std Deviation
Goal setting Skills (GSS)	314	3	.80	2.96	0.74
Decision-making	319	4	.90	2.89	0.92
Formulating Learning Goals (FLG)	296	3	.79	2.41	0.87
Learning Satisfaction(LS)	324	3	.82	2.65	0.86

*Items are rated from 1 (Strongly disagree), 2 (Disagree), 3 (Agree) and 4 (Strongly agree).

For easier interpretation and comparison, each respondent scale scores arc represented as the mean of their item responses.

Table 1 shows the characteristics of the four sub-levels of the scale. In spite of their brevity, they demonstrated adequate reliability, with Cronbach's alpha ranging from .79 to .90. Respondents gave mean ratings to the decisionmaking skills and learning satisfaction sub levels which were near the 'Agree' level. Decision-making skills and learning satisfaction, on the other hand, were between the 'Agree' and 'Disagree' ratings.

Table 2: Exploratory Factor Analysis Showing Item Factor Loadings

Item	GSS	FLG	DMS	LS
GSS 1:1 will work hard to improve my set goals	-.01	-.02	-.01	-.77
GSS 2:1 am willing to set goals so that I will succeed	-.01	.00	.01	-.87
GSS 3:1 am interested in setting goals	.05	.00	-.08	-.67
FLG 1:1 am interested in learning how to formulate learning goals	.90	-.02	-.04	.07
FLG 2:1 am willing to formulate learning goals	.82	-.03	-.04	-.07
FLG 3:1 will put effort into formulating learning goals	.86	-.02	.02	-.05
FLG 4: One of my most important learning goals is to pass more than other students in my programme	.51	.05	.08	-.37
DMS 1:1 have plans that make me achieve all my goals	.02	-.08	-.75	-.01
DMS 2:1 feel as though my goals are good for my skills and abilities	.02	.03	-.82	.04
DMS 3:1 work toward achieving goals that are interesting to me	-.03	.11	-.68	-.08
LS 1:1 am happy with the grade scores from my programme	-.20	.72	.02	-.02
LS 2:1 am satisfied with all my academic grade scores from my programme	-.07	.86	-.05	.01
LS 3:1 am proud of my academic grade scores from my programme	.19	73	. -.03	.02

*Factor loadings with absolute value > .05 are in boldface. GSS = Goal Setting Skills, DMS = Decision-making Skills, FLG = Formulating Learning Goals and LS = Learning Satisfaction.

An exploratory factor analysis was performed using principle axis factoring as the extraction method and direct oblique as the rotation method. Oblique rotation was chosen because it was anticipated that the factors would have some inter-correlation based on the facts that the behaviour traits assumed were related. A screed test indicated that a four- factor solution was appropriate. Therefore, table 2 shows thepattern matrix resulting from this analysis. The scale demonstrated factor structure which was consistent with expectation. All items had high loadings on their own scales, and loaded minimally on the other scales.

Table 3: Factor Inter-correlations

Measure	FLG	LS	DMS	GSS
FLG	—	-.17	-.16	-.59
LS		—	-.34	.01
DMS			—	.30
GSS				--

• FLG = Formulating learning goals, LS = Learning satisfaction, DMS = Decision-making skills and GSS = Goal setting skills.

Factor Inter-correlations were carried out on goal setting skills factor, GSS and Decision-making skills, DMS showed a moderately strong negative correlation (r = -.59). The Learning satisfaction factor showed a moderate correlation with Goal setting and formulating learning goals, GSS and FLG, .30 and .34 respectively. Other factor inter-correlations were weak.

Validity

Goal Setting Skills (GSS). The GSS sub- levels of the measures whether learners (distance or conventional) has set goals. It is expected that learners who set goals will develop strategies toward achieving the set goals. The

items asked learners whether he/she will work hard to improve their set goals on a separate response format with an option of "yes," "no," and "don't know." As expected, those who reported "yes" on GSS had a higher mean than those who responded with "no" or "don't know" (3.49 vs. 2.53, respectively; t = 13.73, df= 304, p<.001, = .62).

Learners were asked to describe their current level of learning goals and learning satisfaction. For both items, the options were 1: not having separate learning goals, 2: not very sure, 3: sometimes, 4: not very necessary and 5: to some extent satisfied. When respondents indicated that their desired to learn how to formulate learning goals or link their general goals to learning was at a higher level than their current level of goal setting, they were coded as having a desire for developing decision-making skills for achieving their level of goal setting. Respondents with desire to learn and develop learning goals and decision-making skills had a higher mean score than respondents without desire to learn and develop learning goals and decision-making skills (3.33 vs. 2.51, respectively; t=9.44, df = 295, p < .001, .48).

Learners were asked about their current level of decision-making skills and their level of learning satisfaction. Respondents were coded as either indicating or not indicating a desire for additional decision-making skills that will enhance satisfaction. Learners with desire for additional decision-making skills scored higher on the learning satisfaction subscales than learners without a desire for additional decision-making skills (3.22 vs. 2.06, t = 12.87, df = 302, p < .001,=.39).

Learning Satisfaction (LS): The LS subscale measures the respondent's happiness for formulating learning goals. It is expected that learners with formulated learning goals will have decision-making skills to accomplish the goals. The study asked respondents about their decision-making strategies, and they were given response format options of "yes," "no," and "don't know." Learners who reported having decision-making strategies obtained a higher mean score than learners who reported "no" or "don't know" (3.45 vs. 2.33).

Discussion
The study was undertaken following the researcher's experience from the three different studies carried out by Tanglang & Aminu (2014); Tanglang & Aminu (2015) and Aminu & Tanglang (2015) to develop measures of Goal Setting, Decision-making and Learning Satisfaction among Distance and

Conventional University Learners. The aims of these studies were for integration into both school counselling service, clinical tools and a means to track level of learning satisfaction. The items developed on the scale are brief and show strong psychometric qualities.

The items on the scale measure four distinct but interrelated dimensions, show respectable internal consistency, and exhibit criterion-related validity. The scale could provide a school counsellor with valuable clinical information. The items that measures goal setting skills and formulating learning goals measure a learner's current level and desire for setting goals. High level of goal setting skills with poor decision-making skills suggests the need for training. The reverse, Low level of goal setting skills with effective decision-making skills suggests a counselling. If a learner scores low on both formulation of learning goals and learning satisfaction subscale, this information could serve as a useful focus for establishing therapeutic alliance between the learner and the school counsellor. This pattern would suggest that the learner is unhappy with his/her current state of learning, but with little counselling motivation for change.

Many learners have become discouraged by what they perceived as learning difficulty. But a skillful counselling psychologist could assist a discouraged learner to explore goal setting and decision-making skills. Training increasing goal setting and decision-making skills could then become a measureable counselling and therapeutic goal.

The scale could also be useful for counselling programme evaluation. As learners progress through a programme and their satisfaction, counsellor would aspire to increase their area of assistance conveying to the counsellor of service satisfaction. Assisting learners to set develop goal setting and decision-making skills could be used in different ways that could lead to life success not necessarily mean that they become comfortable with their performance in all the activities involved. It would simply mean that they become comfortable and satisfied with their level of training on the skills by realising the roles played by the skills. Counsellor would also seek a general desire, understanding that some learners may have made realistic and well-considered decision-making strategies to move forward in their formulation and satisfaction on learning goals.

Conclusion

As the scale continues to be used, there will be an ongoing need for the scale to measure, track and facilitates specific domains of learners' request. It will also be necessary to determine areas that could be of benefit from assessment and developing instruments to accomplish, this could prove a fruitful area for future research. It would also be useful to determine whether scores on the scale can be increased through counselling and psychotherapeutic intervention.

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