

Validating the *Self-Directed Learning Readiness Scale* for use with undergraduate students

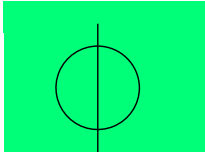
Amanda R. Dumoulin, Jonathan B. K. Lau,
Brandon J. Justus, & Shayna A. Rusticus

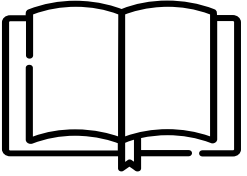
Department of Psychology, Kwantlen Polytechnic University (gdplab.ca)

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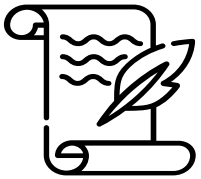
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Self-directed learning: learners are accountable for their own learning goals and needs ([Fisher et al., 2001](#); [Knowles, 1978](#))

Self-directed learning readiness (SDLR): degree to which a learner is ready to be accountable for their own learning and learning needs ([Fisher et al., 2001](#))



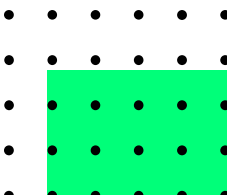
SDLR is an important student outcome from a university education and has been linked to better academic performance and life-long learning tendencies ([Fisher et al., 2001](#)).

SDLR scale ([Fisher et al., 2001](#)) was initially developed for nursing education, and was shortened and revised by Justus et al. (under review; MSDLR) to be relevant to a more general undergraduate population.



Purpose of the present study was to provide additional validity evidence to support the MSDLR to be used within an undergraduate student sample.

RATIONALE



Modified Self-Directed Learning Readiness Scale (MSDLR) [Justus et al. \(under review\)](#)

27 items, 3 subscales

Self-management (SM): 10 items ($\alpha = .91$)

Self-control (SC): 9 items ($\alpha = .81$)

Desire for learning (DL): 8 items ($\alpha = .81$)

New General Self-Efficacy Scale (NGSE)

[Chen et al. \(2001\)](#)

8 items ($\alpha = .89$)

Hypothesis. NGSE will correlate at least moderately and positively with all MSDLR subscales (convergent validity)

Self-Regulation Questionnaire (SRQ)

[Neal & Carey \(2005\)](#)

21 items, 2 subscales

Impulse control (IC): 11 items ($\alpha = .77$)

Goal setting (GS): 10 items ($\alpha = .87$)

Hypotheses. IC will correlate at least moderately and positively with SM & SC of the MSDLR, and a weak correlation with DL

GS will be at least moderately and positively correlated with all MSDLR subscales, with the strongest correlation being with SM

New Social Desirability Scale (NSDS)

[Strahan & Gerbasi, 1972](#)

10 items ($\alpha = .60$)

Hypothesis. NSDS will be uncorrelated with all MSDLR subscales (discriminant validity)

MEASURES

Participants

Demographics	n	%
Undergraduate university students	203	
Female	175	86
Male	28	14
First year	41	20
Second year	56	28
Third year	55	27
Fourth year	41	20
Fifth year or higher	10	5

Procedure & Analysis

All data was collected anonymously online with Qualtrics

Internal Structure

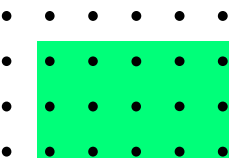
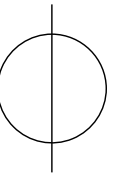
Confirmatory Factor Analysis on MSDLR

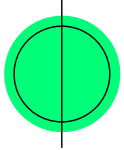
Internal consistency (McDonald's ω)

Relations to Other Variables

Convergent & discriminant validity evidence sought by correlating each subscale of MSDLR to SRQ, NGSE, and NSDS

METHODS





Internal Structure

Confirmatory Factor Analysis

Only 2 of 5 fit statistics acceptable

χ^2 (321, n = 203) = 601, p < .001; RMSEA = .07; SRMR = .07;
CFI = .88; TLI = .87

Exploratory Factor Analysis (follow up)

Only 1 of 3 fit statistics acceptable for 3 factor model

χ^2 (273, n = 203) = 601, p < .001; RMSEA = .06; TLI = .89

Parallel analysis and scree plot: 3 factors

Factor loadings: 3 distinct factors

2 items failed to load
1 item loaded into incorrect factor
2 items cross-loaded

Internal Consistency

Self-Management: ω = .92 (95% CI [0.90, 0.93])

Desire to Learn: ω = .81 (95% CI [.77, .85])

Self-Control: ω = .81 (95% CI [.77, .85])

Relations to Other Variables

Scale	SM	DL	SC
Impulse Control (SRQ)	.55	.43	.49
Goal Setting (SRQ)	.69	.45	.66
Self-Efficacy (NGSE)	.62	.60	.58
Social Desirability (NSDS)	-.20	-.02	-.15

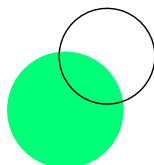
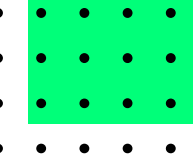
Convergent Hypotheses

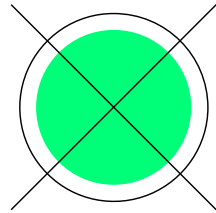
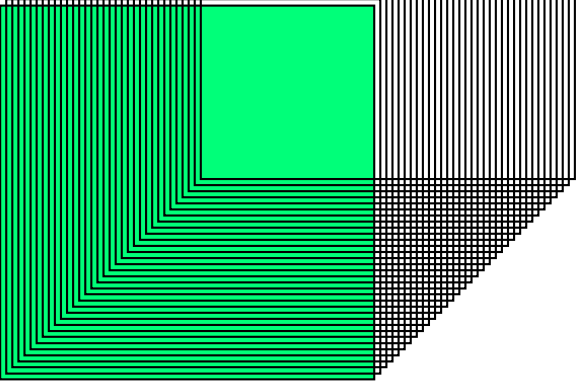
- ✓ IC x SM & SC: at least moderate, positive
- ✓ GS x DL & SC: moderate, positive
- ✓ GS x SM: strongest
- ✓ NGSE x SM, DL, & SC: moderate, positive

Discriminant Hypotheses

- ✓ NSDS x SM, DL, & SC: no correlation
- ✗ IC x DL: weak, positive

RESULTS





CFA **did not support** the proposed three-factor model of the MSDLR

EFA **suggested a three-factor structure** but there was some **cross-loadings** and items that failed to load

Reliability was **acceptable** for all 3 subscales ($\omega = .81 - .92$)

Convergent validity **evidence was found** for all three subscales

Some discriminant validity evidence was found, indicating that the MSDLR does not measure social desirability; however, the NSDS had poor reliability so **more evidence is needed**

Further research is needed to ensure the MSDLR can be a viable tool in higher education by examining the discriminant validity and fit statistics

DISCUSSION

