

A COMPARISON OF GOAL ACHIEVEMENT OF STUDENTS IN A SOCIAL RESEARCH METHODS CLASS DURING COVID

David J. F. Maree¹, & Marinda Maree²

¹*Department of Psychology, University of Pretoria (South Africa)*

²*School of the Arts, University of Pretoria (South Africa)*

Abstract

From 2020 to 2022, the module, social research methods was taught online to third-year undergraduate students whilst lockdown due to Covid was in place. Goal achievement was assessed with the Goal Achievement Questionnaire (GAQ) measuring several constructs: Pathway, Goal setting efficacy, Resilience, Optimism, Agency, Absence of state despair and External locus of control. The GAQ was developed to indicate goal-orientated behaviour based on underlying psychological resources such as agency and resilience. Goal achievement is not only a cognitive activity but involves multiple levels of human psychological functioning. Mastery and performance goal orientation were also assessed, and the relationship between psychological constructs and academic performance was determined. The academic performance of the three-year groups (N = 1643) was compared to those that completed the GAQ (N = 175). Although academic performance showed significant differences between the three-year groups ($F(2, 1327) = 11.67, p < .001$), no significant differences were found for levels for the Goal Achievement constructs for the selected sample. A significant relationship ($r = .2, p < .05, n = 137$) between academic performance and Goal setting efficacy was found. A significant difference between Semester and Exam Marks, four GAQ constructs and performance-approach goal orientation for ethnic groups (African, Indian and White) was found. The results are compared to previous findings by the authors: the African group regarded performance goals as less important than the White group. The implications of the findings are discussed.

Keywords: *Goal achievement, academic performance, social research methods, mastery and performance goals, Covid.*

1. Introduction

It is well known that Covid had a deleterious effect on mental well being of students although academic performance might not have suffered as much. In some instances, it was found that students performed better which might have been an effect of the online environment. Examining performance, causes and experiences is required on many fronts as we move out of the restrictions Covid imposed on academic institutions (Ramlo, 2021).

The first author taught a third-year social research methods class (RES320) before and during Covid where the mode of delivery was drastically changed within the year Covid struck. The course was changed to a largely online course, assessments were increased from two to five but also in an online mode and the exam was also virtual. The authors developed an instrument assessing goal achievement (Locke & Latham, 2006; Senko et al., 2011) some years ago and determined the relationship between the various dimensions with academic performance of students (Maree & Maree, 2013). This exercise was repeated with the RES320 class in order to investigate the effects of the Covid-induced restrictions on the goal achievement of students and their academic performance. In addition, their growth-mindset was also assessed by means of four dimensions of how students might view goals. A distinction can be made between performance and mastery goals (Grant & Dweck, 2003). Mastery refers to the focus of a students on the enjoyment of learning, while performance refers to the focus on performing well and high achievement. In time both goals were categorised as avoidance and approach goals to accommodate the positive and negative effects of achievement orientation (Elliot & McGregor, 2001). Approach refers to achieving the goal to gain an advantage such as mastering a skill or performing well for the sake of doing well. Avoidance refers to achieving those goals for the sake of avoiding negative judgement, such as performing well in an exam as to avoid being regarded as a failure.

2. Sampling

Year groups for the Res320 module were invited to participate. The number of students in each realised/class sample were $n = 89/654$ (2020), $n = 28/480$ (2021), $n = 58/509$ (2022). The total realised/class sample was 175/1643 The sample was thus voluntary and not random.

3. Design

A survey design was utilised at three time periods, namely, 2020, 2021 and 2022.

4. Ethical clearance

Ethical clearance was obtained from the Faculty of Humanities' Research and Ethics committee in 2020 for the continuing project, number HUM006/1120.

5. Methods

Two measurements were utilised, namely academic performance for the RES320 module and scores on the dimensions of the GAQ, as well as performance/Approach goals.

5.1. Instruments

Three marks are usually obtained, namely, a semester mark, exam mark and final mark as the average of the two. The exam mark is usually significantly lower than the semester mark reflecting a more accurate estimate of knowledge.

The GAQ was developed in South Africa some years ago (Maree et al., 2008a, 2008b). It went through two revisions and the factor structure was revised (Maree & Maree, 2013). The analysis of the second versions was based on Rasch modelling and dimensionality analysis. There are 7 sub-dimensions, namely, Pathway, Goal setting efficacy, Resilience, Optimism, Agency, Absence of state despair and External locus of control. The rationale of the instrument is to provide an estimate of a person's goal clarity, orientation and achievement. Example items are provided in Table 1. The response scale is (A) definitely false, (B) mostly false, (C) mostly true, or (D) definitely true. Reliability for the sub-dimensions ranged from .71-.83 and .63 for Optimism.

Table 1. GAQ dimensions (Adapted from Maree & Maree, 2013).

Label	Sample Item	Description	Low score	High score
Pathway	There are many ways to solve a problem	The belief that one can find ways to solve problems and reach goals	Indicates an inability to find ways to a goal	Indicates a strong belief on one's ability to find ways to achieve goals
Goal setting efficacy	I am able to set goals for myself	Inclination to be internally motivated to set and achieve goals.	Indicates a tendency to set goals without achieving them. Can also indicate lack of goal setting behaviour	Can set goals but also tends to achieve them
Resilience	I can cope despite past difficulties	The belief that one is able to accomplish things despite difficulties	Lacks belief that one can do better despite difficult circumstances	Ability to prevail despite past or present difficulties
Optimism	I believe I have a good future despite difficulties	Expectation of good things to happen (instead of bad)	Lack of optimism or belief in a better future	Staying optimistic despite difficulties
Agency	I am responsible to make things happen	Actively responding to events	Not acting or taking responsibility	Taking control in response to events

Label	Sample Item	Description	Low score	High score
Absence of state despair	I feel depressed	Experiencing feelings of despair, helplessness and self-blame	Experiencing despair, self-blame and feelings of depression and pessimism	Lack of despair and self-blame. Lack of these feelings does not imply a positive mood.
External LOC	Circumstances influence me easily	Close to learned helplessness	Experience feelings of helplessness, not in control and delivered to external events	Lack of learned helplessness. Lack does not imply efficacy or control.

Goal mastery and performance were estimated with 12 items. An example item for performance approach goals is “It is important for me to do better than other students” and for performance avoidance: “I just want to avoid doing poorly in this class.”

5.2. Analysis

For the academic marks, GAQ, and Mastery and performance goals, the descriptive statistics for the three year groups are provided namely number of students, mean and standard deviation. In addition, the number of items, Cronbach Alpha (based on the total sample) are indicated for all except the academic performance.

Two scores were used for academic marks, namely a semester mark which was the average of the best four semester tests. Each test had 50 online items, randomly chosen for each student from a large item bank and students had 120 minutes to do the tests. The exam consisted of 150 items and students had 180 minutes to complete the exam. The best items (based on reliability contribution and discrimination value) were chosen from the items done during the semester tests. The exam thus consisted of a fixed set which means the items would have been encountered by different student. The time limit increased the difficulty level of completing the exam as the difference between the means for the semester test and exam mark showed (**Error! Reference source not found.**).

The difference between the scores for the three years groups and three ethnic groups were determined by a one-way ANOVA with post hoc comparisons using a Bonferroni adjustment. In addition, the GAQ and Goal instruments were correlated with academic performance.

6. Results

Table 2. Descriptive statistics of scales by year.

Variable	2020			2021			2022			N of items	α	F	DF1	DF2	p
	N	Mean	SD	N	Mean	SD	N	Mean	SD						
Semester Mark	84	81.08	9.09	23	83.26	8.36	45	82.47	7.57		0.766	2	149	0.467	
Exam Mark	84	62.86	16.56	23	65.00	15.31	45	67.53	13.50		1.339	2	149	0.265	
GAQ Pathway	78	3.03	0.48	25	3.10	0.46	54	3.07	0.46	6	.82	0.268	2	154	0.765
GAQ Goal-setting efficacy	78	3.22	0.42	25	3.14	0.50	54	3.12	0.45	7	.81	0.93	2	154	0.397
GAQ Resilience	77	3.34	0.47	25	3.33	0.48	54	3.31	0.49	8	.84	0.057	2	153	0.945
GAQ Optimism	79	2.75	0.51	26	2.83	0.56	54	2.67	0.51	5	.62	0.866	2	156	0.423
GAQ Agency	77	3.52	0.33	24	3.47	0.51	54	3.48	0.42	8	.77	0.227	2	152	0.797
GAQ Absence of state despair	79	2.21	0.64	26	2.21	0.63	54	2.26	0.60	8	.84	0.129	2	156	0.879
GAQ External LOC	78	1.78	0.41	25	1.83	0.49	54	1.80	0.46	8	.74	0.124	2	154	0.883
Mastery Approach	89	3.52	0.44	27	3.52	0.59	58	3.36	0.58	3	.73	1.885	2	171	0.155
Mastery Avoidance	88	3.28	0.54	27	3.12	0.76	58	3.19	0.72	3	.70	0.713	2	170	0.492
Performance Approach	89	3.30	0.63	28	3.42	0.56	58	3.19	0.72	3	.80	1.201	2	172	0.303
Performance Avoidance	89	3.36	0.68	28	3.43	0.75	58	3.26	0.74	3	.88	0.638	2	172	0.53

Table 3. Descriptive statistics of scales by ethnic groups.

Variable	Black			Indian			White			Group				
	N	Mean	SD	N	Mean	SD	N	Mean	SD		F	DF1	DF2	p
Semester Mark	47	78.28	9.41	10	86.20	6.30	89	83.09	7.88	6.69	2	143	0.00*	I, W>B
Exam Mark	47	58.02	15.47	10	69.30	14.83	89	67.09	15.01	6.09	2	143	0.00*	W>B
GAQ Pathway	47	2.86	0.49	9	2.93	0.45	95	3.15	0.43	7.14	2	148	0.00*	W>B
GAQ Goal-setting efficacy	47	3.03	0.46	9	3.05	0.33	95	3.24	0.42	4.28	2	148	0.02*	W>B
GAQ Resilience	47	3.26	0.48	9	2.99	0.80	94	3.38	0.41	3.58	2	147	0.03*	W>I
GAQ Optimism	49	2.78	0.59	9	2.51	0.63	95	2.72	0.47	1.08	2	150	0.34	
GAQ Agency	45	3.39	0.43	9	3.26	0.43	95	3.56	0.36	4.90	2	146	0.01*	W>B
GAQ Absence of state despair	49	2.35	0.58	9	2.49	0.55	95	2.15	0.64	2.48	2	150	0.09	
GAQ External LOC	47	1.86	0.44	9	1.86	0.47	95	1.78	0.43	0.60	2	148	0.55	
Mastery Approach	55	3.42	0.58	12	3.50	0.64	100	3.49	0.48	0.30	2	164	0.74	
Mastery Avoidance	54	3.20	0.64	12	3.00	0.78	100	3.26	0.63	0.96	2	163	0.39	
Performance Approach	55	3.07	0.67	12	3.42	0.67	101	3.37	0.63	4.35	2	165	0.01*	W>B
Performance Avoidance	55	3.33	0.78	12	3.11	0.70	101	3.38	0.67	0.76	2	165	0.47	

7. Discussion

Although academic performance showed significant differences between the three-year groups ($F(2, 1327) = 11.67, p < .001$) for the larger group, no significant differences were found for levels for the Goal Achievement and the Mastery/Performance Goals constructs for the sample that completed the GAQ and related ($n = *$)(**Error! Reference source not found.**). Interestingly, no significant difference was found for Exam Marks for the selected sample ($F(2,149) = 1.34, p > 0.05$) for the three years.

The variables were also examined for the three largest ethnic groups, namely, Black ($n = 55$), Indian ($n = 12$) and White ($n = 101$). As can be seen from **Error! Reference source not found.**, White performed better than Black students although the mean scores in the sixties. In addition, White scored higher than Black students on Pathway, Goal-setting efficacy, Agency, and Performance Approach goals. White had higher scores for Resilience than Indian students. It must be noted that the average scores for the scales range from just below average to slightly above average (2.8 to 3.4), thus indicating average levels on the scales. No group scored 2 and lower or 4 or higher on the scales except for External locus of control which means that students felt exposed to external events and experienced loss of control. This tendency is supported by low scores on optimism, and state despair (both below 3 and closer to 2).

The Pearson correlation between the scales and academic performance showed a significant relationship between Exam scores and Goal setting efficacy ($r = .2, p < .05, n = 137$).

8. Conclusion

In sum, the selected group experienced feelings of low optimism, exhibited state despair and feel their external circumstances are difficult to manage and control. These tendencies probably reflect the experience of students in the covid and lockdown situation where they hardly feel in control of their lives. Despite these tendencies, they were able to set clear and achievable goals and in fact, perform well academically. The ethnic group differences are interesting and show an opposite trend found some years ago .

However, the study's main limitation is the small, realised sample and very unbalanced groups. It would be interesting to compare students' perceptions from 2023 onward and compare with the current sample. The realised sample might be strongly influenced by students experiencing feelings of lack of control brought along by Covid, thus it is a highly self-selected sample.

References

- Elliot, A. J., & McGregor, H. A. (2001). A 2x2 achievement goal framework. *Journal of Personality and Social Psychology, 80*(3), 501-519.
- Grant, H., & Dweck, C. S. (2003). Clarifying achievement goals and their impact. *Journal of Personality and Social Psychology, 85*(3), 541-553. <https://doi.org/10.1037/0022-3514.85.3.541>
- Locke, E. a., & Latham, G. P. (2006). New Directions in Goal-Setting Theory. *Current Directions in Psychological Science, 15*(5), 265-269. <https://doi.org/10.1111/j.1467-8721.2006.00449.x>
- Maree, D. J. F., & Maree, M. (2013). Multi-cultural differences in hope and goal-achievement In M. P. Wissing (Ed.), *Well-being research in South Africa* (pp. 439-477). Springer.
- Maree, D. J. F., Maree, M., & Collins, C. (2008a). Constructing a South African hope measure. *Journal of Psychology in Africa, 18*(1), 167-178.
- Maree, D. J. F., Maree, M., & Collins, C. (2008b). The relationship between hope and goal achievement. *Journal of Psychology in Africa, 18*(1), 65-74.
- Ramlo, S. (2021). The coronavirus and higher education: Faculty viewpoints about universities moving online during a worldwide pandemic. *Innovative Higher Education, 46*, 241-259. <https://doi.org/10.1007/s10755-020-09532-8>
- Senko, C., Hulleman, C. S., & Harackiewicz, J. M. (2011). Achievement goal theory at the crossroads: Old controversies, current challenges, and new directions. *Educational Psychologist, 46*(1), 26-47. <https://doi.org/10.1080/00461520.2011.538646>