The interplay between motivation, self-efficacy, and approaches to studying

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Background. The strategies students adopt in their study are influenced by a number of social-cognitive factors and impact upon their academic performance.
Aims. The present study examined the interrelationships between motivation orientation {intrinsic and extrinsic), self-efficacy (in reading academic texts and essay writing), and approaches to studying (deep, strategic, and surface). The study also examined changes in approaches to studying over time.
Sample. A total of 163 first-year undergraduate students in psychology at a UK university took part in the study.
Methods. Participants completed the Work Preference Inventory motivation questionnaire, self-efficacy in reading and writing questionnaires and the short version of the Revised Approaches to Study Inventory.
Results. The results showed that both intrinsic and extrinsic motivation orientations v/ere correlated with approaches to studying. The results also showed that students classified as high in self-efficacy (reading and writing) were more likely to adopt a deep or strategic approach to studying, while students classified as low in self-efficacy (reading and writing) were more likely to adopt a surface approach. More importantly, changes in students' approaches to studying over time were related to their self-efficacy beliefs, where students with low levels of self-efficacy decreased in their deep approach and increased their surface approach across time. Students with high levels of self efficacy (both reading and writing) demonstrated no such change in approaches to studying.
Conclusions. Our results demonstrate the important role of self-efficacy in understanding both motivation and learning approaches in undergraduate students. Furthermore, given that reading academic text and writing essays are essential aspects of many undergraduate degrees, our results provide some indication that focusing on self-efficacy beliefs amongst students may be beneficial to improving their approaches to study.

Взаимосвязь мотивации, самоэффективности и подходов к обучению.

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Используемые студентами в их обучении стратегии подвержены влиянию ряда социально –когнитивных факторов и, в свою очередь, влияют на академическую успеваемость.
Цели. Данное исследование посвящено изучению взаимосвязи между мотивационной ориентацией(внутренней и внешней), самоэффективностью (в чтении академических текстов и написании эссе) и подходами к обучению (глубокий, стратегический и поверхностный). Ктоме того, рассматриваются изменения подходов с течением времени.
Выборка. В исследовании приняли участие 163 студента –психолога, обучающихся в университетах Великобритании.
Методы. Испытуемые заполнили мотивационный опросник Work Preference Inventory, опросники самоэффективности в чтении и письме и короткую версию опросника Revised Approaches to Study

Выводы. Наши результаты демонстрируют важную роль самоэффективности в понимании как мотивации, так и подходов к обучению студентов. Более того, принимая во внимание важность чтения академических текстов и написание эссе во многих областях высшего образования, полученные результаты служат индикатором того, что фокусировка внимания на самоэффективности студентов может быть полезной для улучшения их подходов к обучению.

Table 1. Values of coefficient alpha for individual subscales

	Subscales	Number of items	Alpha Time 1	Alpha Time 2
Motivation	Intrinsic	15	.723	.817
	Extrinsic	15	.707	.705
	Enjoyment	8	.695	.766
	Challenge	7	.697	.740
	Outwards	10	.720	.765
	Compensation	5	.649	.656
Approaches to studying	Deep	6	.815	.795
	Strategic	6	.791	.789
	Surface	6	.725	.745
Self-efficacy	Writing	12	.898	.918
	Reading	12	.897	.881

Table 2. Correlation coefficients between subscales of motivation and approaches to studying

	Enjoyment	Challenge	Outward	Compensation
Time 1				
Deep	.452***	.488***	−.037	.141
Strategic	.185*	.362***	.001	.370***
Surface	.020	−.401***	.306***	−.128
Time 2				
Deep	.496***	.525***	−.216**	.284***
Strategic	.273***	.402***	−.029	.493***
Surface	.049	−.380***	.232**	−.223**

*$p < .05$; **$p < .01$; ***$p < .001$.

Table 3. Regression analyses of approaches to studying at each testing time

Criterion	Predictor	Adj. R^2	β	*t*	*p*
Time 1					
Deep	Challenge	.233	0.376	5.43	.0001
	Enjoyment	.320	0.321	4.64	.0001
Strategic	Compensation	.132	0.323	4.62	.0001
	Challenge	.224	0.314	4.48	.0001
Surface	Challenge	.156	−0.340	−4.80	.0001
	Outward	.216	0.294	4.08	.0001
	Compensation	.230	−0.145	−2.01	.046
Time 2					
Deep	Challenge	.272	0.262	3.38	.001
	Enjoyment	.353	0.361	5.17	.0001
	Compensation	.372	0.190	2.88	.004
	Outward	.389	−0.156	−2.35	.020
Strategic	Compensation	.238	0.410	5.99	.0001
	Challenge	.307	0.281	4.11	.0001
Surface	Challenge	.139	−0.503	−6.37	.0001
	Enjoyment	.194	0.275	3.48	.001

Table 4. Correlations coefficients between self-efficacy and approaches to studying at Time 2

	Self-efficacy in writing	Self-efficacy in reading
Deep	.330***	.457***
Strategic	.352***	.433***
Surface	−.481***	−.458***

***$p < .001$.

Table 5. Mean scores for students classified as high and low self-efficacy across approaches to studying and time

	Deep		Strategic		Surface	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Self-efficacy in reading						
Low ($N = 81$)	4.48 (0.91)[a]	4.19 (0.80)	4.55 (0.89)	4.23 (0.89)	3.94 (0.88)	4.19 (0.96)
High ($N = 82$)	4.88 (0.75)	4.92 (0.81)	5.02 (0.87)	4.91 (0.94)	3.50 (1.00)	3.44 (0.91)
Self-efficacy in writing						
Low ($N = 86$)[b]	4.55 (0.86)	4.28 (0.83)	4.49 (0.93)	4.25 (0.89)	3.93 (0.99)	4.21 (0.97)
High ($N = 77$)	4.83 (0.82)	4.87 (0.84)	5.11 (0.77)	4.93 (0.94)	3.50 (0.88)	3.37 (0.85)

[a] *SD* in parenthesis.

[b] Due to the participants scores a 50/50 split was not possible. These figures represent a 52.8%/47.2% split.

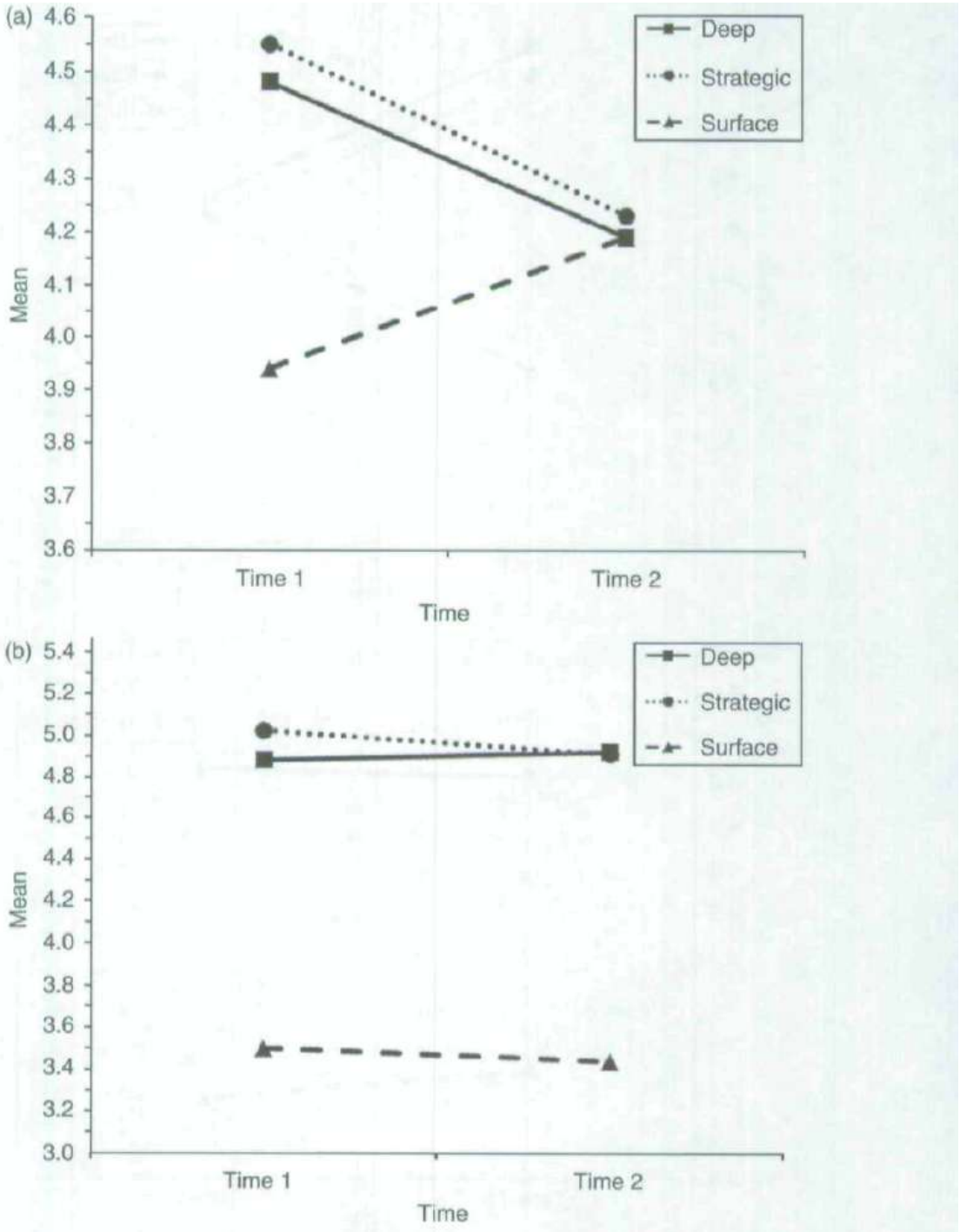

Figure 1. (a) Changes in learning approaches between Times 1 and 2 by students classified as low self-efficacy in reading. (b) Changes in learning approaches between Times 1 and 2 by students classified as high self-efficacy in reading.

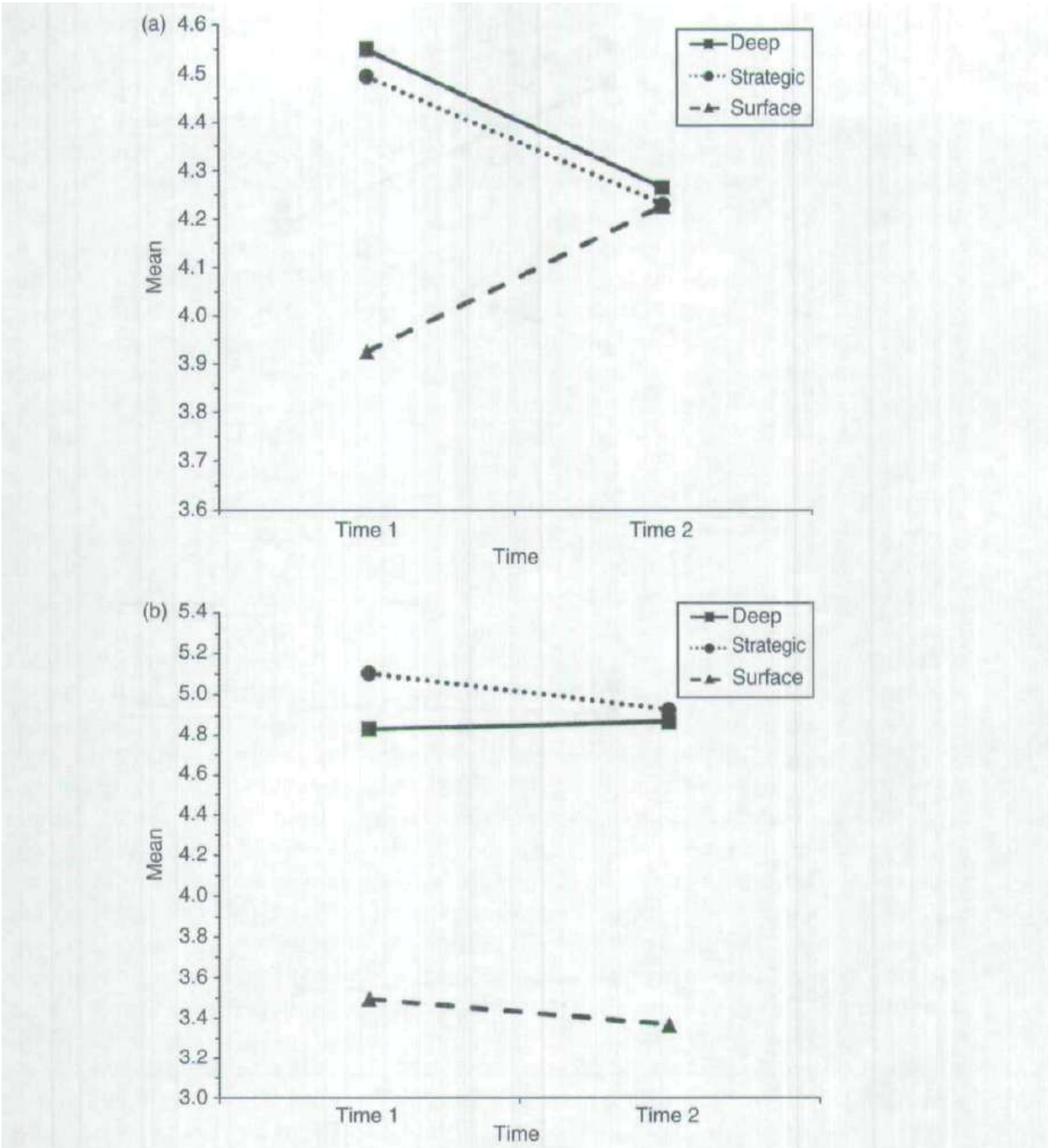

Figure 2. (a) Changes in learning approaches between Times 1 and 2 by students classified as low self-efficacy in writing. (b) Changes in learning approaches between Times 1 and 2 by students classified as high self-efficacy in writing.