



CRITICAL THINKING ABILITY
DEPENDS ON WHOM YOU LIVE
WITH.

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Where do students live?

- 45% of students in Scotland choose to stay in their parental home while studying at university.
- Elsewhere in the world it can be fewer than 1%.
- Differentiated as "Commuter Students" and "On-Campus Students"

(Scottish Government, 2008; "University of Michigan", 2014; "Columbia University", 2014)



What influences the choice and why does it matter?

- Financial Motivations
- Maturity/Confidence
- Social Aspects
- Academic Benefits



Theoretical Stance

- Tinto's Theory of Student Retention
- Tinto's Learning Communities

(Tinto, 1975; 1997; 1998)

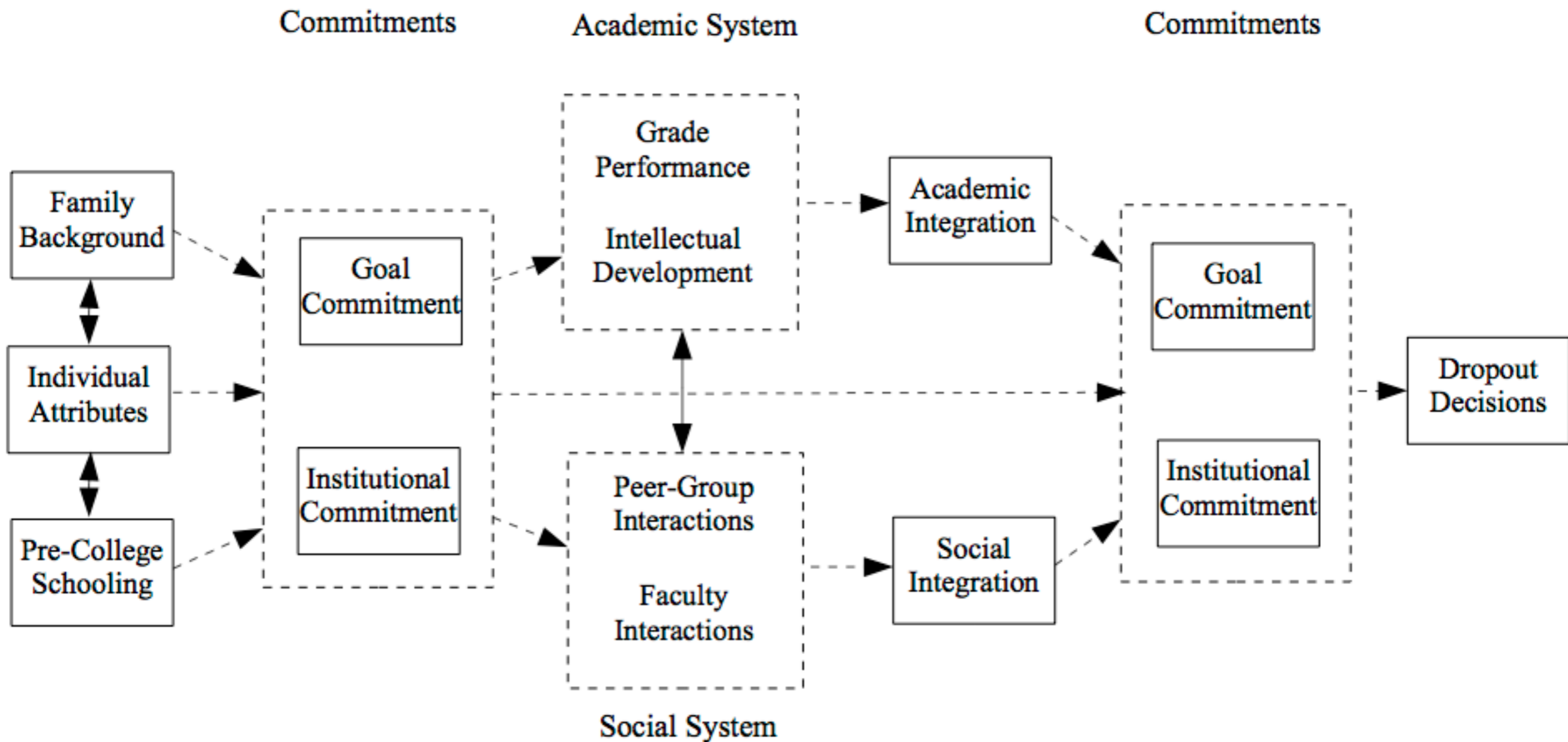


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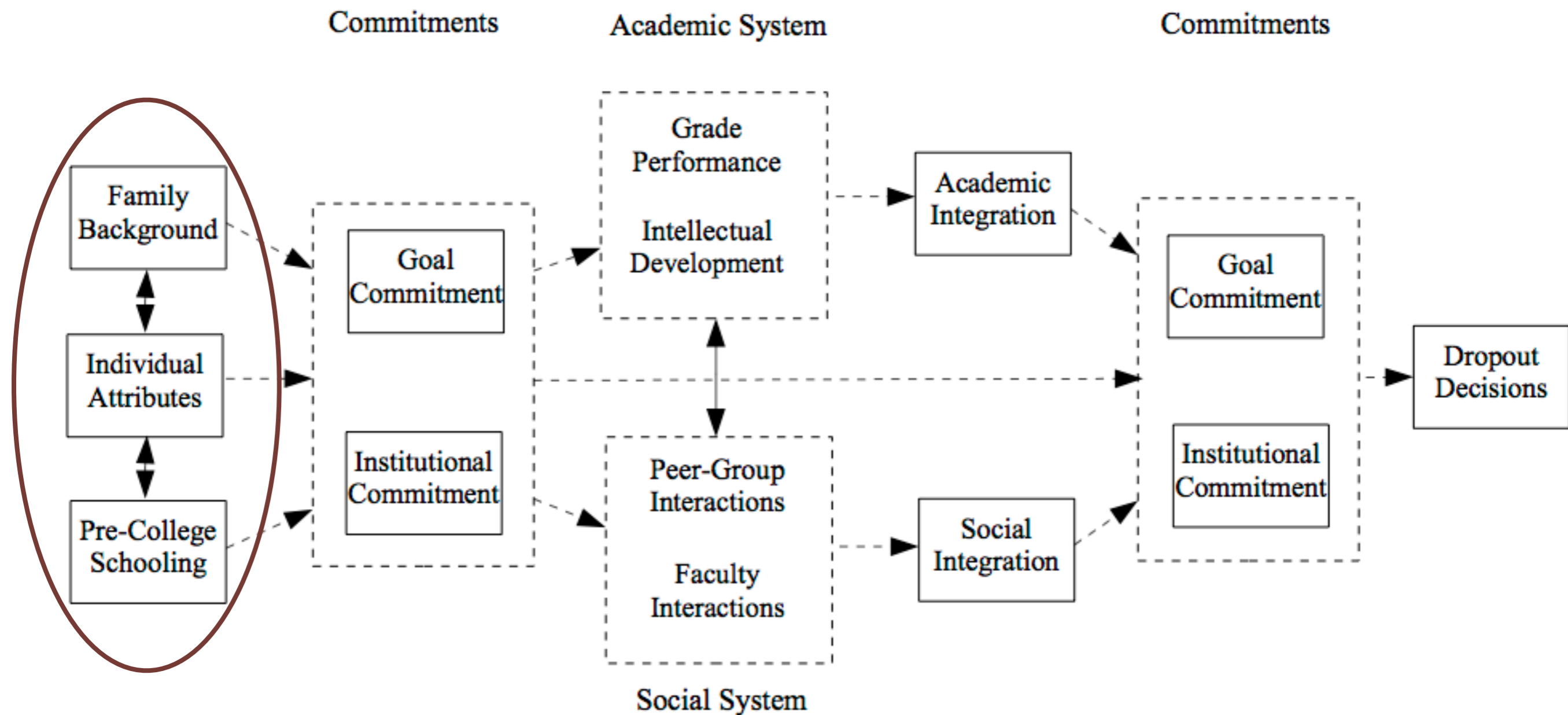
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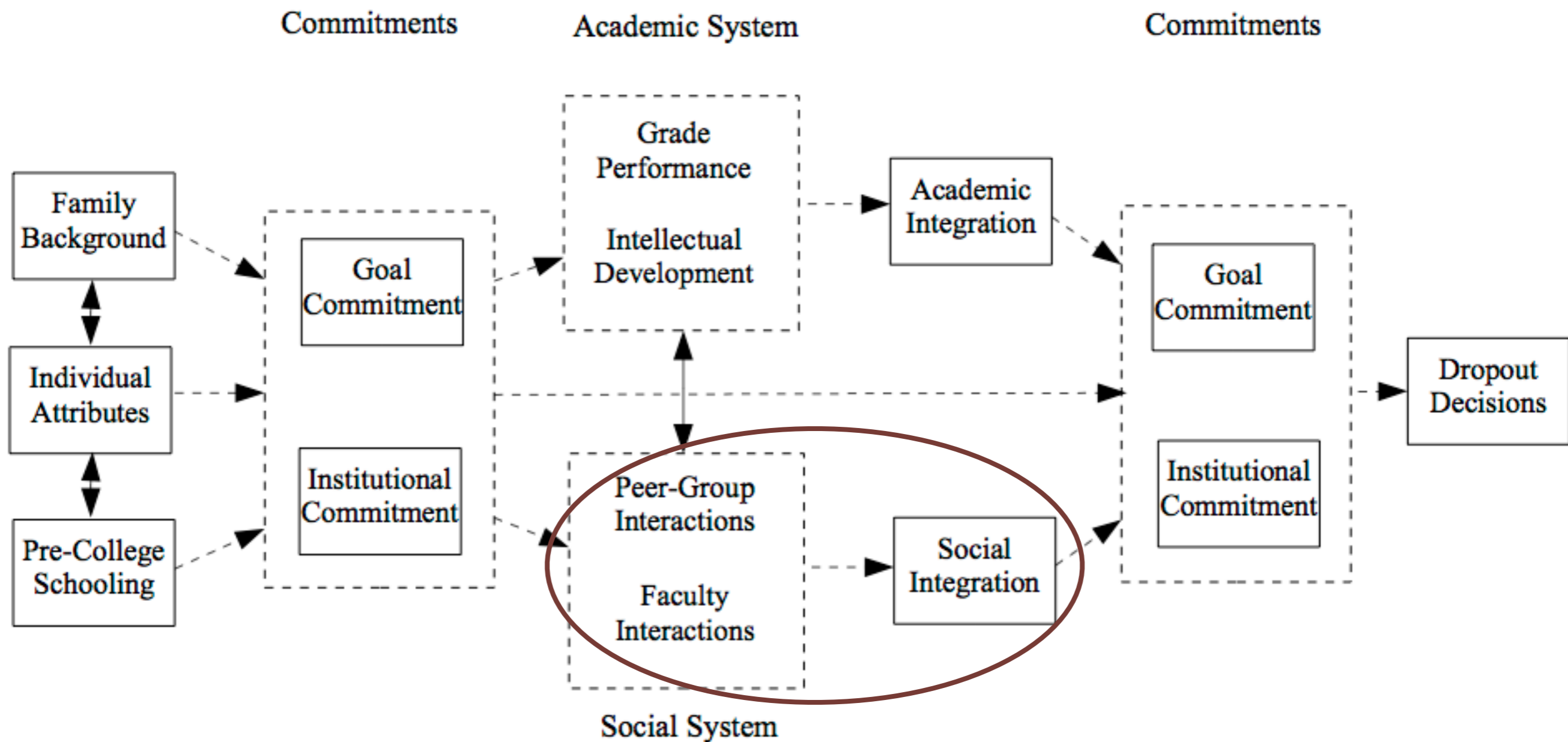
A Conceptual Schema for Dropout from College.

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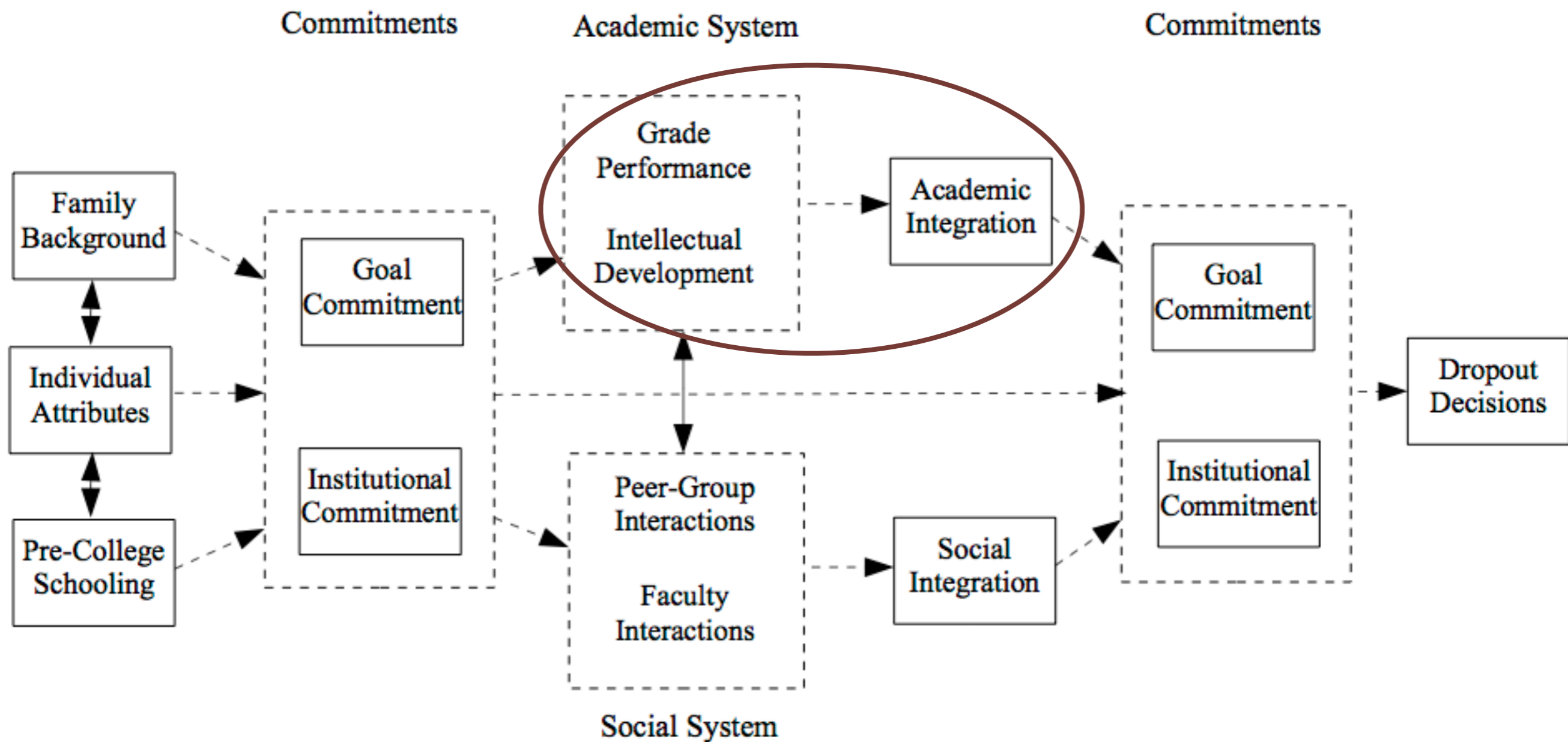
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Cognitive Impact of Living Situation

- Last study examining intellectual differences was in 1993.
- Study found that between first year undergraduate students, commuter students had lower critical thinking scores.

(Pascarella et al., 1993)



Empirical Considerations

- Two decades have passed since the last study examining an intellectual difference.
- In the 1990s around 77,000 degrees were awarded in the UK. In 2011 over 350,000 were awarded.
- The internet has changed the face of education, many studies have found that Critical Thinking can be developed online effectively.

(Bolton, 2012; Guiller, Durndell and Ross, 2008; Şendağa and Odabaşı, 2009; Mendenhall and Johnson, 2010; Petchtone, Puangtong, Chaijaroen, and Sumalee, 2012;)



Socio-Economic Variance

- What impact could a student's socio-economic background have on their intellectual ability and wellbeing?



“Each family transmits to its children, indirectly rather than directly, a certain cultural capital and a certain ethos. The latter is a system of implicit and deeply interiorised values which, among other things, helps to define attitudes towards... educational institutions.”

– Pierre Bourdieu

Socio-Economic Variance

- Students from lower socio-economic backgrounds feel they have nowhere to belong.
- These are also the students who often choose to commute due to financial restrictions.

(Patiniotis and Holdsworth, 2005; Holdsworth, 2006)



Hypotheses

- (i) Commuter students, on average, will exhibit poorer critical thinking abilities than on-campus students.
- (ii) Commuter students, on average, will exhibit poorer wellbeing than on-campus students.
- (iii) Students who are in their fourth year at university, regardless of their living arrangement will exhibit better critical thinking abilities, on average, than students who are in their first year.
- (iv) Students who report taking part in discussions will, on average, exhibit better critical thinking abilities than students who do not report taking part in discussions.



Method

- 105 Participants*
 - Aged 17-42
 - 22 Different Nationalities
- Three Sections
 - Demographic Information
 - Wellbeing Measure
 - Critical Thinking Measure

*46 Participants Completed All Three Sections.



Definition of Living Situation

- Pascarella and colleagues defined a commuter student as ones who “live off-campus and commute to the university”
- It was felt that their definition of a commuter student was too vague within a British sample.

Pascarella et al. (1993 p. 216)



Living Arrangement	% of Sample		Journey Time To Class	% of Sample
With Parents/Family	29.5		0-10 Minutes	21.9
With Students (Friends)	48.6		11-20 Minutes	22.9
With Students (Non-friends)	7.6		21-30 Minutes	21.0
With Non-students (Friends)	4.8		31-60 Minutes	21.0
With Non-students (Non-friends)	1.9		More than an hour	12.4
Lives Alone	7.6			
With Friends	53.3			
With Non-friends	9.5			

Living Situation

Sample Breakdown

Critical Thinking Measure

- The Ennis-Weir Critical Thinking Essay Test
 - Developed by Ennis and Weir (1985)
 - Chosen due to its neutral nature and its proven reliability in a university population.
 - Participants read a fictional letter written to a newspaper editor and respond in 9 numbered paragraphs.
 - 40 minutes to complete.

(Ennis and Weir, 1985)



Results



Headline Significant Result (i)



Critical Thinking Score 0-33

Living Arrangement	Median
Friends	21.3
Parents/Family	18.8
Non-friends	14.5

Headline Significant Result (i)

Headline Significant Result (ii)



Critical Thinking Score 0-33

Parental Education	Median
Any parental degree	20
No parental degree	7.5

Headline Significant Result (ii)

Headline Significant Result (iii)



Critical Thinking Score 0-33

Parental Income	Median
Greater than £125,000	25.25
£50,000 - £124,999	19.5
£0 - £24,999	15.5

Headline Significant Result (iii)

Critical Thinking			p	Median Scores	
<i>Students (Friends)</i>	>	<i>Parents/Family</i>	.026	20.0	18.8
<i>Parents/Family</i>	>	<i>Students (Non-friends)</i>	.029	18.8	13.5
<i>Friends</i>	>	<i>Parents/Family</i>	.023	21.3	18.8
<i>Friends</i>	>	<i>Non-friends</i>	.024	21.3	14.5
<i>4th Year Student</i>	>	<i>1st Year Student</i>	.036	21.3	18.5
<i>Parent with Degree</i>	>	<i>No Parent with Degree</i>	.005	20.0	7.5
<i>Parental Income More than £125,000</i>	>	<i>Parental Income £0-24,999</i>	.026	25.25	15.5
<i>Parental Income Between £50,000 and £124,999</i>	>	<i>Parental Income £0-24,999</i>	.051	19.5	15.5
Optimism					
<i>Non-students (Friends)</i>	>	<i>Parents/Family</i>	.014	6.0	3.0
<i>Friends</i>	>	<i>Non-friends</i>	.019	4.0	0.0
Self-Esteem					
<i>Friends</i>	>	<i>Non-friends</i>	.017	3.5	-1.0
Social Interest					
<i>Journey Time – 0-10 Minutes</i>	>	<i>Journey Time – 11-20 Minutes</i>	.056	5.0	3.0
Energy					
<i>Friends</i>	>	<i>Non-friends</i>	.04	3.0	0.0

Note. > – Depicts the direction of the difference.

Details of Significant Results

Implications from Hypothesis (i) - Commuter students, on average, will exhibit poorer critical thinking abilities than on-campus students.

- The results of Pascarella et al. (1993) are supported in part.
- Two contrasting findings presented: students who lived off-campus did not have the lowest Critical Thinking scores, and journey time did not impact Critical Thinking scores.
- Considering the link between “peer-group interactions” and “intellectual development” in Tinto's model, and his theory behind learning communities, could explain why the finding for Non-friends was been found
- Learning communities could be malleable.
- The presence of parental interaction may be a mediating factor for the development of Critical Thinking.

Implications from Hypothesis (ii) - Commuter students, on average, will exhibit poorer wellbeing than on-campus students.

- Only found for optimism between the Parents/Family and Non-student friends suggesting that Commuter Students may be reasonably well supported socially.
- Students who lived with friends had higher optimism, self-esteem, and energy than students who lived with non-friends.
 - This supports the theory proposed by Tinto where interaction leads to social integration.
 - It counters previous arguments that suggest location lowers wellbeing rather than with whom the students live.
 - The non-friend group could have other factors which may confound this result.

Implications from Hypothesis (iii) - Students who are in their fourth year at university, regardless of their living arrangement, will exhibit better critical thinking abilities, on average, than students who are in their first year.

- While expected to be found, it presents clearly that university in general promoted the development of critical thinking.
- Supports the findings of Pascarella et al. (1993) who also found a gain in critical thinking over a set period of time at university.

Implications from Hypothesis (iv) - Students who report taking part in discussions will, on average, exhibit better critical thinking abilities than students who do not report taking part in discussions.

- No differences found for *amount* of discussion of ideas in general nor of students' courses.
- Contrasts with finding differences based on with whom students live.

Implications from other reported findings.

- A linear relationship emerged based on parental income and there was an increase in critical thinking scores as income increased.
- Students' whose parents have occupations requiring a degree have better critical thinking skills supports the notion that deep-rooted values and attitudes towards university are passed down.
 - Only one degree was required for the effect to present. What does this imply regarding the influence of individual parents?
 - Largest difference of the study found for this factor.

(Bourdieu, 1976)

Limitations of the Study

- Unequal representation of academic disciplines.
- Quasi-experimental.
- Possible cohort effect.



Implications for Policy

- Commuter students face discrimination in regard to places at university halls of residence in several universities across the Scotland.
- While they can make their own private arrangements, it is unlikely that they will be exposed to as broad a network of student peers as students in halls of residence will be.
- GPA may need to be investigated additionally in order to fully inform governmental policy changes as many policies both in and outside of Scotland depend on this in order to assess financial support (e.g. funding).



