Dynamic Approach to Understanding Child Development

3rd Year
C8897
15 Credits
Spring Term 2017

Module Convenor: Dr Jessica S. Horst

University of Sussex

MODULE STRUCTURE, AIMS AND OBJECTIVES

This module will cover current topics in developmental psychology. A brief introduction to dynamic systems theory and the associative learning account will be provided by the instructor in the first week of class. During the rest of the module we will read and discuss recent research form the framework of this perspective. Topics will include: motor coordination and learning to walk, learning about objects and categories, language acquisition (nouns) and spatial cognition. Assessment will include student in-class presentations and final essay.

MODULE LEARNING OUTCOMES

By the end of the module, a successful student should be able to:

- Understand the key concepts of dynamic systems
- Evaluate the relevance of empirical evidence concerning child development
- Evaluate the methods and procedures used in developmental research
- Discuss the contribution of dynamic systems theory to understanding child development

PRE-REQUISITES

The prerequisite for this module is 'Developmental Psychology' (C8546).

MODULE CONTACT INFORMATION

The module convenor is Dr. Jessica Horst.

Location: Pevensey 1, 1c 09
Telephone: (01273) 873084
E-mail: jessica@sussex.ac.uk

STUDENT FEEDBACK SESSIONS

Student feedback sessions are for your benefit. You are welcome to come discuss ANYTHING module related during this time. You may also email to make an appointment for a specific time. Please see http://www.sussex.ac.uk/profiles/205721 for office hours/student consultation times.

STUDY DIRECT

You are encouraged to access module materials and use the module forum in Study Direct. This is the best way to share ideas amongst your fellow students and ask questions about the module. It is preferable that you ask **queries via the Study Direct** module forum than by email. If you email the module convenor, please specify which class you are in (many instructors are teaching more than one module at a time).

TEACHING AND LEARNING

Opportunities for learning on this module include:

1. Lectures	2 x 2hr Lectures	Weeks 1-2
2. Seminars	6 x 2hr Seminars	Weeks 3-6, 9-12
3. Independent Study		

Please see your timetable in Sussex Direct for details of when and where this module will meet.

1. Lectures. The module will begin with 2 2-hour lectures to introduce you to Dynamic Systems Theory and the topics we will cover during the seminars. The material covered in these introductory lectures is CRUCIAL for building your foundational understanding of Dynamic Systems Theory, which you will need to do well in this module.

2. Seminars. There will be 6 2-hour seminars in this module. Seminars will begin with short presentations of the assigned readings by students assigned to the relevant reading. **Everyone** is expected to participate in the class discussion following each presentation.

3. Independent Study. The difference between studying at university and study you may have done previously is that at university the emphasis is on you finding out things for yourself. Not everything you will need or want to know will be covered in the classroom. You need to become familiar with the material you are guided towards, but you also need to learn to 'manipulate' that material: apply it to new domains, compare and contrast across topics, synthesise it, evaluate it, consider its relevance to issues of interest to you, supplement it, etc. This can only be done by being interested and working hard because you want to. Thus, study because you want to learn and stop when you have answers to your own satisfaction for the questions you care about. Finally, note that independent study is study you engage in outside of formal contact hours with faculty and tutors, but it does not have to be solitary.

To avoid disruption to the majority, please try to arrive at least 5 minutes before the start time of the lecture or seminar (see lecture attendance etiquette in Psychology programme handbook). Please keep your mobile phone on silent during the lectures and seminars.

You should note that all the study skills advice in existence suggests that straightforward 'absorption' of material (i.e., reading, listening, rote-learning and memorising) should take up about 20% of learning time. The other 80% should come from 'interrogating' that information (e.g., looking for links, attempting to summarise and synthesise, looking for strengths and weaknesses and possible improvements, applying to different areas, etc.).

ASSESSMENT

This module is assessed by means of:

			Weighting
Coursework			**30%**
	Group Presentation	10%	
	Essay (summary)	20%	
Project (Study Design Assignment)			**70%**

SUBMISSION DEADLINES

Please consult your assessment deadlines timetable on Sussex Direct: https://direct.sussex.ac.uk

GROUP PRESENTATION

Each student will be assigned to present one of the readings to the class before we start discussing that reading. You may also choose to present alone.

Your presentation should recap your summary and should include:

- The goals/hypotheses of the study
- The methods used
    - The participants (e.g., newborn infants)
    - The methods used (e.g., test of stepping reflex)
    - Anything particularly note-worthy about the design (e.g., infants were placed waist-deep in water)
- The general results (in plain English: what did they find? E.g., in water infants who do not normally exhibit a stepping reflex DID show the reflex).
- If the goals were met/hypotheses were found to be true or false
- Your impressions
    - Likes/dislikes
    - Implications for understanding child development
    - Directions for future research
    - How the reading influenced your thinking about child development

ESSAY (SUMMARY)

On the day you give your presentation should also submit a summary of the paper in your own words (no longer than 2 sides of A4, typed in 12pt font, 1inch margins). After your presentation you should turn 1 copy of this summary into the instructor.

PROJECT (AKA STUDY DESIGN ASSIGNMENT)

The word limit for this essay is strictly 3000 words. You should consult your timetable in Sussex Direct for the exact due date.

In this assignment you will write a proposal for at least experiment on an aspect of child development (e.g., learning to walk; learning to talk; peer relationships, etc.). The proposal should include (1) a brief literature review outlining the problems and issues in the area and (2) a description of the experiment that would logically follow from these issues. Your description of the experiment should explain why would have chosen your particular design and how this experiment stems from a dynamic approach to understanding child development.

Your study proposal should be “realistic,” that is, you should only propose ethical studies and you should take care that your variables can be measured and analysed.

Example essays are available on Study Direct.

ASSESSMENT INFORMATION

Information on the following can be found at the link below:

- Submitting your work
- Missing a deadline
- Late penalties
- Exceptional circumstances
- Exams
- Help with managing your studies and competing your work
- Assessment Criteria

http://www.sussex.ac.uk/psychology/internal/students/examinationsandassessment

ATTENDANCE, ABSENCE AND ENGAGEMENT

You are expected to be 'in attendance' at the University for the full duration of the published term dates for your course of study. That means you should be regularly attending lectures, seminars, labs etc. and committing time to your studies to be in a position to comply with academic and administrative expectations.

The university has an 80% attendance policy in place, so it's really important that you let us know if you are ill or cannot attend classes so that we can register this as a notified absence.

If you are unable to attend your seminars or workshops, you need to send an email to psychologyabsence@sussex.ac.uk setting out the following information:

- Seminar(s) / workshop(s) that you will be absent from (list all of them)

- Tutor name

- Brief reason for absence

Please see the following link for further information:
http://www.sussex.ac.uk/psychology/internal/students/attendance

DISCUSSION QUESTIONS

To facilitate discussion, students are asked to submit discussions via Poll Everywhere to facilitate the seminar discussions. You are not required to answer your own question. You may ask questions about:

- Points needing clarification (e.g., definitions, analyses, questions about studies mentioned in the introduction)
- Thoughts on how a reading relates to another reading or phenomenon in child development.
- Ideas for future research
- Questions/comments about the implications of a study
- Questions/comments about how the reading relates to general ideas from dynamic systems theory/child development.

BOOKS AND READINGS

All of the essential readings for this class are primary source journal articles available on the module website or at the library. You are expected to read the assigned readings **BEFORE** each lecture or seminar.

ESSENTIAL READINGS: ALL ON STUDY DIRECT

Benitez, V. L. & Smith, L. B. (2012). Predictable locations aid early object name learning. *Cogntion,* 125(3), 339-352.

Collisson, B. A., Grela, B., Spaulding, T., Rueckl, J. G., & Magnuson, J. S. (2015). Individual differences in the shape bias in preschool children with specific language impairment and typical language development: theoretical and clinical implications. *Developmental science*, *18*(3), 373-388.

Corbetta, D. & Snapp-Childs, W. (2009). Seeing and touching: The role of sensory-motor experience on the development of infant reaching. *Infant Behavior & Development.* 32(1), 44-58.

Diedrich, F. J., Thelen, E., Smith, L. B., & Corbetta, D. (2000). Motor memory is a factor in infant perseverative errors. *Developmental Science*, 3(4), 479-494.

Dishion, T. J., Nelson, S. E., Winter, C. E., & Bullock, B. M. (2004). Adolescent Friendship as a Dynamic System: Entropy and Deviance in the Etiology and Course of Male Antisocial Behavior. Journal of Abnormal Child Psychology, 32(6), 651-663.

Gillen- O'Neel, C., Huynh, V. W. & Fuligni, A. J. (2013). To study or to sleep? The academic costs of extra studying at the expense of sleep. *Child Development*, 84(1), 133-142.

Hollenstein, T., Granic, I., Stoolmiller, M., & Snyder, J. (2004). Rigidity in parent—child interactions and the development of externalizing and internalizing behavior in early childhood. *Journal of abnormal child psychology*, *32*(6), 595-607.

Horváth, K., Myers, K., Foster, R., & Plunkett, K. (2015). Napping facilitates word learning in early lexical development. *Journal of sleep research*. Advance online publication.

Jones, S. (2003). Late talkers show no shape bias in a novel name extension task. *Developmental Science,* 6(5), 477-483.

Libertus, K. & Needham, A. (2010) Teach to reach: The effects of active vs. Passive reaching experiences on action and perception. *Vision Research,* 50(24), 2750-2757.

Mainhard. T., Pennings. H. J. M., Wubbels. T. & Brekelmans. M. (2012). Mapping control and affiliation in teacher student interaction with state space grids. *Teaching and Teacher Education, 28,* 1027-1037.

Patterson, G. R., DeGarmo, D. & Forgatch, M. S. (2004). Systematic Changes in Families Following Prevention Trials. *Journal of Abnormal Child Psychology*, 32(6), 621-633.
Smith, L.B. (2005). Action Alters Shape Categories. *Cognitive Science*, 29(4), 665-679.
Smith, L. B., Yu, C., & Pereira, A. F. (2011). Not your mother's view: The dynamics of toddler visual experience. *Developmental science*, *14*(1), 9-17.
Spencer, J. P., & Schutte, A. R. (2004). Unifying representations and responses: Perseverative biases arise from a single behavioral system. *Psychological Science,* 15(3), 187-193.
Thom, E. E., & Sandhofer, C. M. (2009). More is more: The relationship between vocabulary size and word extension. *Journal of experimental child psychology*, *104*(4), 466-473.
Twomey, K. E., Ranson, S. L., & Horst, J. S. (2014). That's more like it: multiple exemplars facilitate word learning. *Infant and Child Development*, *23*(2), 105-122.
Williams, S. E. & Horst, J. S. (2014). Goodnight book: Sleep consolidation improves word learning via storybooks. *Frontiers in Psychology* 5.

RECOMMENDED READINGS

Adolph, K.E., Corbetta, D., Vereijken, B., Spencer, J. (2005). IN MEMORIAM: Esther Thelen. *Infancy, 7(1),* 1-4.
Corbetta, D., & Ulrich, B.D. (2008). Esther Thelen's Legacy: A dynamic world that continues to reach out to others. *Infancy, 13(3),* 197-203.
Elman, J. (2003). Development: it's about time. *Developmental Science, 6*(4), 430-433.
Howe, M.L., & Lewis, M.D. (2005). The importance of dynamic systems approaches for understanding development. *Developmental Review, 25,* 247-251.
Lewis, M.D. (2000). The promise of dynamic systems approaches for an integrated account of human development. *Child Development, 71(1),* 36-43.
Savelsbergh, G.J.P., Vereijken, B., & Zaal, F.T.J.M. (2005). Putting the 'motor' back into development: The legacy of Esther Thelen (1941-2004). *Infant Behavior & Development, 28,* 97-98.
Smith, L.B. (2005). Cognition as a dynamic system: Principles from embodiment. *Developmental Review, 25,* 278-298.
Smith, L. B. & Thelen, E. (2003). Development as a dynamic system. *Trends in Cognitive Sciences, 7(8),* 343-348.
Spencer, J. P., Clearfield, M., Corbetta, D., Ulrich, B., Buchanan, P., & Schöner, G. (2006). Moving toward a grand theory of development: In memory of Esther Thelen. *Child Development,* 77(6), 1521-1538.
Thelen, E., & Smith, L. B. (1994). *A Dynamic Systems Approach to the Development of Cognition and Action*. Cambridge, MA: MIT Press.
van Geert, P. (1998). We almost had a great future behind us: The contribution of non-linear dynamics to developmental-science-in-the-making. *Developmental Science 1(1),* 143-159.

MODULE SCHEDULE

For a timeline or schedule of when we will discuss each reading, please see the Study Direct site.