Master’s thesis seminar

HANNA JÄRVENOJA AND ESSI VUOPALA/ LET

Schedule for today

12.15 Current stage of the thesis

13.00 About writing a method chapter (and a reminder of academic writing)

14.00 Article task

14.30 Discussion and next steps

14.45-15.30 Working with one’s own empirical part

Current situation?

Describe shortly the state of your study:
What you have done so far, what parts of the plan are progressing well, where you have challenges (5min/student)

UNIVERSITY
OF OULU

The Empirical Part of The Thesis
- Your Contribution!

Structure of the empirical part

- Aim and research questions
- Research methods
  - Context of the study
  - Participant
  - Data collection and analysis
- Results

3. AIM AND RESEARCH QUESTIONS

4. METHODS

3.1. Participants and Context

3.2. Study design and data collection procedure

3.3 Methods

3.4. Data analysis

4. RESULTS

4.1. RQ1 xxx

4.2. RQ2 xxx

4.3. RQ3 xxx

4.4. Summary of the main findings

AIM

- Core of your research!

- Clear aim that is expressed coherently in all parts.

- Reframe the research questions as long as they are formulated right and precisely. RQs are both your tools and guides in your research.

- Do not have to include anything else than general aim/objective and specific RQs (2-3)
  - Don’t make questions that can be answered yes/no -> then use hypothesis (but be aware what you need to be able to do with analysis to prove them)

This part is the checking point during the process:
Is my theoretical part framing the aim?
Does the aim and RQ s reflect what I have actually done? Does the discussion highlight my main findings according the aim?

Example (by Kaisa Pihlaja)

3 AIM AND RESEARCH QUESTIONS

This study focuses on students' interpretation of scaffolding provided by instructors in a blended learning environment. The main goal is to examine different types of scaffolding recognized by students that have impacts on their learning. Another goal is to consider the effectiveness of scaffolding based on students' perspective.

The following questions are formulated to guide the research process:

Question 1. How do the students interpret instructors' scaffolding in a blended learning environment?

Question 2. Are the students' interpretations of scaffolding aligned with actual scaffolding when learning in a blended learning environment?

Question 3. How do the students evaluate the scaffolding's effectiveness for their learning in a blended learning environment?

Question 4. Is there a correlation between the students' interpretations and evaluation of scaffolding's effectiveness in a blended learning environment?

Original article

doi: 10.1111/jcal.12045

Journal of Computer Assisted Learning

Self-regulation during e-learning: using behavioural evidence from navigation log files

D. Jeske, J. Backhaus & C. Stamov Roßnagel

Jacobs Center on Lifelong Learning and Institutional Development, Jacobs University Bremen, Bremen, Germany

Hypotheses

The research therefore reiterates the propositions by Cunningham *et al*. (1993), as well as Ning and Downing (2012) by proposing that both navigation behaviour and motivation are process variables. Our navigation variables include the number of backward and forward jumps that occur out of sequence and time in the e-module. These navigation variables have also been examined in other research by Chen and Ford (1998).

Based on the literature review mentioned earlier, we propose one overarching general as well as several specific hypotheses.

Hypothesis 1: Navigation behaviours are significant mediators between learning experience and test performance.

Hypothesis 2: A positive learning experience reduces the number of forward jumps. Here the implication is that the learning experience can influence the degree to which individuals are approaching the task with more thought, planning and effort.

Hypothesis 3: More forward jumps reduce test performance. The implication here is that limited content engagement leads to lower performance on test questions.

Hypothesis 4: A positive learning experience reduces the number of backward jumps. Here the implication is that the learning experience can influence the degree to which learners focus on their task, reducing disorientation.

Hypothesis 5: More backward jumps reduce test performance. The implication here is that more backward jumps may indicate more disorientation and poor self-monitoring.

Research design, methods and analysis

Research Methodology

- Participants (Describe *who, How many, From where, How Were They chosen, Why They Were chosen*)
- Context
- Research design/Procedure etc. (picture, table etc.)
- Data collection procedure
  - Methods used
  - Analysis procedure
    - Describe the progression of the analysis carefully and in a concrete way → has to replicable → validity
    - Coding scheme including examples from the data.
    - Kappa values

Not general facts/description about analyses methods etc. However, use references to methodological research literature!

Clear and easy, GET A GOOD EXAMPLE!

3. Method

3.1. Participants and context

This voluntary study involved 44 second-year teacher education students (36 females and 8 males, mean age 24.9 years) who were participating in a compulsory seven-week math didactics course. The math course was composed of seven lectures and one extensive collaborative course assignment. The students collaborated in eleven groups of three to four members to create a midterm plan for a primary school mathematics topic. The midterm plan was supposed to involve theory-grounded pedagogical principles, several lesson plans and a plan for assessment. The assignment was conducted during several collaborative group sessions, and it was presumed that the groups planned and organised their groupwork independently.

The students composed their midterm plan during five 2-hour sessions in the classroom-like laboratory space. The groupwork was recorded with a 360-degree video camera system capturing the students' discussions, movements, expressions and gestures. The groups used the laboratory space two to five times ($M = 4$, $SD = 0.96$), resulting in video recordings from 41 collaborative group task sessions (three to five collaborative group task sessions from each group; 44 hours video of data altogether).

3.2. The S-REG mobile application

In the beginning of each collaborative session, students used an HTML5 mobile application called the S-REG tool (BLINDED FOR THE REVIEW). The S-REG tool (Figure 1) is a responsive group awareness tool designed to run on smartphones, tablets and desktops. It aims to support group members' awareness of the motivational, emotional, and cognitive states of the collaborative learning and prompts groups to activate appropriate group-level regulation to respond to the group's situational needs.

FIGURE 1 HERE

Prior to S-REG tool use, the students were asked to consider the requirements and goals of the current collaborative working phase with their group members (Figure 1A). S-REG tool use proceeded in three phases: first, students were asked to individually evaluate their cognitive ("I know how to proceed working"), motivational ("I am motivated to work"), and emotional ("My emotional state at the moment") ability in the current situation with a round-shape sliding scale (Figure 1B). The sliding scale is visual for the user but is programmed on a scale from zero to one hundred. Then, the S-REG tool generated a "traffic light" visualisation as an indicator of the group's joint cognitive, motivational

Contents lists available at ScienceDirect

International Journal of Educational Research

journal homepage: www.elsevier.com/locate/ijedures

Socially shared regulation of learning and participation in social interaction in collaborative learning

Jaana Isohätälä*, Hanna Järvenoja, Sanna Järvelä

University of Oulu, Finland

3. Methods

3.1. Context and participants

The participants of this study were teacher education students who worked on collaborative tasks in a mathematics education course at a Finnish university. As 2nd year students of the same class, the students already knew each other well. The students had followed the same course schedule and curriculum and they were accustomed to the local practices of teacher education which emphasize collaborative learning. Given students' age, education and previous experience of collaboration with each other, it could be expected that students had appropriate conditions for engaging in strategic interaction.

The course was held in a classroom-like research space with spherical 360° cameras. The course included six lessons in which students worked on collaborative tasks about the following mathematical and didactical topics: 1) Planning a mathematics education project, 2) Estimation and mental calculation, 3) Percentages, 4) Assessing mathematics skills, 5) Problem solving and 6) Learning algebra with a balance scale. Altogether 40 h of video data was collected but, for the purposes of this micro-analytical study, we focused on groups' collaboration on two lessons which involved more mathematical than didactical content and a similar set of tasks and level of difficulty. The selected topics were Estimation and mental calculation and Problem solving. The estimation and mental calculation tasks required students, for example, to estimate the results of various brain-teasing calculations and to solve a problem with several unit transformations. The problem-solving tasks included four problems, for example "A fake among nine coins", "Seven bridges of Königsberg" and a challenging task involving combinatorics. While the tasks were rather structured, they were difficult enough to challenge students' mathematical understanding and required them to explore different strategies for solving the tasks.

Students were asked to work collaboratively during the tasks. The groups started their collaboration by reading the task instructions and using a tablet tool called S-REG (Laru, Malmberg, Järvenoja, Sarenius, & Järvelä, 2015; Järvelä et al., 2016a) to evaluate and discuss perceptions about their cognitive capabilities, motivation and emotions concerning the task. Next, groups began working on the tasks at their own pace. The groups had approximately one hour to complete the tasks.

3.2. Data

The collaboration of eleven groups was video-recorded during the chosen lessons, but the videos of six groups were chosen for analysis. Other groups were omitted because of absences in one of the two lessons that were selected for analysis. The six remaining groups each had four members ($n = 24$, 20 women, $M_{age} = 24$ years, $Std = 4$ years), though in four of the twelve videos only three students were present. All in all, twelve videos (10 h 31 min, $M_{duration} = 53$ min, $Std = 3$ min) were used for micro-level analysis.

Materials

Learning materials and characteristics

In order to capture learner behaviour and navigation, the authors produced two short e-modules on health effects of shift work and team development. These common topics were chosen to keep age and familiarity effects to a minimum. The e-modules were developed specifically for the project, had a similar format, length and layout. All test questions, while involving participants to recall factual knowledge were phrased so as to be broader and more comprehension based. The materials were presented in a sequential and highly structured format with simple phrasing and sentence structure/length to compensate for potential differences in prior knowledge (Clark & Feldon, 2005). Pages were designed to minimize loading time (13 kb/page) across different browsers. The participants were able to self-pace through the e-module, providing them with maximal control (van Merriënboer & Kester, 2005). Participants did not need to log in; they only needed to access a specific link. All participant data were cross-checked to ensure they came from the right classes before their data was included in the final dataset.

Data collection, procedure and participants

Processes

Log files recorded all navigation behaviours and time on all pages within the e-module. A log file script enabled us to extract specific log file information about interactions of the learners with the e-module content (as the information would have been overwhelming otherwise). This information was compiled into a table listing each user's interactions. We extracted a list of pages that were visited, number of visits per page and

who also had the option to participate in a lottery scheme to win vouchers for an online book store. The student participants were recruited via their instructors, the online participants via an online announcement posted on two research websites.

Participants

We originally had 360 participants; however, following data screening, we excluded a number of cases (final $N = 332$). Student recruits made up the majority ($n = 271$) of participants, Internet participants just a minority ($n = 51$). Two-thirds of participants were women ($n = 218$, 67.7%) and one-third men ($n = 93$, 28.9%), which may be due to the fact that participants were recruited primarily in psychology classes (11 missing values). Participants were aged 18–68 (average 24 years, mode indicated that the most common age was 21 years old). Half of the participants were aged 18–21 (55.4%). Another third of participants were aged between 22 and 30 years old (34.1 %). The remainder of the sample were between 31 and 40 years old (5.1%) or older than 41 years old (5.4%). In terms of education, 19.3% ($n = 62$) had a high school diploma, 31.7% had some vocational training or some college ($n = 102$). Another 18.8% had an associate's or Bachelor's degree ($n = 67$), Masters or PhD ($n = 12$). No information was available for 79 participants.

Measures

As we wished to replicate the findings of Ning and Downing (2012), we also used similar measures.

Learning experience

This was measured using three items that assessed par-

Early Childhood Research Quarterly 41 (2017) 50–62

Contents lists available at ScienceDirect

Early Childhood Research Quarterly

journal homepage: www.elsevier.com/locate/ecresq

Young children's use of emotion and behaviour regulation strategies in socio-emotionally challenging day-care situations

Kristiina Kurki*, Hanna Järvenoja, Sanna Järvelä, Arttu Mykkänen

Learning and Educational Technology Research Unit, Faculty of Education, University of Oulu, P.O.BOX 2000, FIN-90014, Finland

5.2. Approach to analysis

The analysis began by identifying the events from the video corpus that were regarded as socio-emotionally challenging and assessing them in terms of teacher involvement (Phase 1) children's regulation strategies (Phase 2). After this, the associations between children's strategies and teacher involvement were assessed by using sequential analysis (Phase 3). Finally, children's adaptations of strategies were compared between the events with or without teacher involvement (Phase 4). The analysis was conducted using Observer XT software for coding strategies, teacher involvement and children's adaptive behaviours noted in video events as well as performing preliminary sequence analysis.

5.2.1. Phase 1. Identifying socio-emotionally challenging events

The selection of the socio-emotionally challenging events was made using a specific data selection method called "selectively employed video analysis" (Derry et al., 2010). The challenging events were identified as situations with clearly visible indications of emotional reactions or conflicting goals between participants (Arsenio & Lover, 1997; Järvenoja et al., 2012). Altogether, 75 events with different socio-emotional challenges were chosen from the video corpus for the detailed analysis of regulation strategies. 30% of the events were discussed with another researcher and 100% agreement was reached in identifying events as socio-emotionally challenging. The events consisted of peer or teacher-child conflict situations, situations where children expressed separation anxiety or where specific behavioural expectations for children were present (e.g. when children were expected to listen to a teacher directed program). Also other emotion-eliciting situations were found, such as when a child expressed fear towards a scary looking doll. The durations of these events ranged from 0.5 to 6 min. There were one to three children involved in each event. Each child participant was involved in approximately 4.2 events, the range being from one to nine events per child.

The chosen events were classified into two categories based on teacher involvement. When the teacher was not present, did not become present in the event nor contributed to solving the challenge, the event was coded as an event without teacher involvement. The event was coded as including teacher involvement when the teacher either was or became involved and used some verbal or non-verbal regulation to solve the challenging situation. Altogether, 48 events with teacher involvement and 27 events without teacher involvement were found.

To illustrate how the analysis proceeded, an example event is presented. A girl (Maija, 3.5 years) and a boy (Niko, 3.5 years) have a

Table 1
Analysis Phases of an example event of two children who both would like to play with a piece of mattress.

	Phase 1	Phase 2	Phase 3	Phase 4
	Event: Dialogue and behaviours	Children's strategies (Strategy type)	Sequences	Adaptation
Maija	*Pulls the mattress.*	Physical regulation (M)	Association	
Niko	*Pulls the mattress.*	Physical regulation (M)		
Niko	*Cries when attempting to get the mattress back.*	Expressing emotions (R)		
Maija	*Pulls the mattress.*	Physical regulation (M)		
Niko	*Cries.*	Expressing emotions (R)		
Niko	*"I had it!"*	Providing information (P)	Association	
Teacher	*Begins to ask the children questions and solve the situation.*	Teacher involvement		
Niko	*"She stole it from me."*	Providing information (P)		
Maija	*"Yes, but…. I want to play with it."*	Expressing opinion/will (P)		
Teacher	*Takes the mattress, sets it aside as a building block and directs the children to another type of play.*			
Maija	*Begins towards the newly indicated type of play.*	Redirecting activity (A)		
Maija	*Expresses excitement about the new type of play by jumping.*	Expressing emotions (R)		
Niko	*Continues to play in the type of play the teacher suggested.*	Redirecting activity (A)		
Explanation for adaptation analysis				
Niko	*The child stops fighting over the mattress, changes strategies and redirects activity towards a new type of play.*			Change in strategy
Maija	*The child stops fighting over the mattress, changes strategies and redirects activity towards a new type of play.*			Change in strategy

Note: M: Situation modification; P: Providing information; S: Situation selection; A: Redirecting activity/attention; R: Response modulation.

teacher involvement.

5.2.2. Phase 2. Identifying children's strategies

Next, the analysis proceeded by identifying the strategies used by each child during challenging events. Children's behaviours indicating one particular strategy were treated as a unit of analysis in this phase of analysis. The regulation strategy categories were created and reformulated by combining data driven analysis of video events and literature reviews of emotion regulation strategies (Hsieh & Shannon, 2005; Whitebread & Pino-Pasternak, 2013). In the coding, verbal and physical strategies were considered. Finally, based on the formed strategy categories, children's strategies during the event were coded into the timeline of the event using Observer XT software. When a child

behaviour, such as when a child stopped yelling when asked
Appendix A, a detailed description and examples of each strategy
tegory are provided, whereas the example event (Table 1) and p
cularly the column of Phase 2 illustrate how different strategies
their strategy types were coded in the events. During the exa
event, Maija and Niko were coded using a variety of different strate
to modify the situation and their own responses. They were also i
tified as providing information about the situation, demonstrating t
own wills and redirecting their own activities.

To explore children's strategies in terms of teacher involvem
teacher involvement events were analysed further by coding the po
in time when the teacher became involved within the same time
with children's strategy codes by using Observer XT software

Learning and Instruction xxx (2017) 1–11

Contents lists available at ScienceDirect

Learning and Instruction

journal homepage: www.elsevier.com/locate/learninstruc

The role of daily autonomous and controlled educational goals in students' academic emotion states: An experience sampling method approach

Elina E. Ketonen [a, *], Julia Dietrich [b], Julia Moeller [c], Katariina Salmela-Aro [a, d], Kirsti Lonka [a, e]

2. Method

2.1. Participants and procedure

The participants were 55 Finnish first-year university students (69% female; mean age = 22.4 years; SD = 3.1). They studied at the University of Jyväskylä (20 psychology majors), the University of Helsinki (15 teacher students majoring in either education or educational psychology), and the Helsinki Metropolitan University of Applied Sciences (20 media engineering majors). Data collection took place using the contextual activity sampling system (CASS) instrument, which is an experience-sampling software program that runs on smartphones (Inkinen et al., 2014; Litmanen et al., 2012; Tolvanen et al., 2011). Before the data collection started, the participants were provided with smartphones as data-collecting devices and one hour of user training on how to use the CASS software. During the 14 days of data collection, the participants' phones beeped five times a day as a signal to complete a short questionnaire. There was a fixed sampling schedule (three-hour predefined intervals), with the participants being able to choose their first sampling time in the morning between 7 a.m. and 10 a.m. (i.e., interval-contingent sampling, see Hektner, Schmidt, & Csikszentmihalyi, 2007). The typical daily sampling schedule was a morning questionnaire at 9 a.m., three daytime questionnaires at 12 a.m., 3 p.m., and 6 p.m., and an evening questionnaire at 9 p.m. (not used in this study). The participants were asked to complete the questionnaire immediately after receiving it. For more information about the CASS procedure, see Inkinen et al. (2014).

In this study the assessment procedure resulted in a maximum of 56 completed state questionnaires for each participant (over 14 days with one morning beep and three daytime beeps), or 3080 questionnaires overall (56 questionnaires per person from 55 participants). The final totals included 2716 fully or partially completed questionnaires (88.2%). Of those, the average number of completed questionnaires per person was 49.4 (ranging from 29 to 56; median = 51). Before the two-week diary period, the participants responded to a pretest questionnaire assessing their depressive symptoms and life satisfaction (and background information).

2.2. Measures

2.2.1. Autonomous and controlled motivation

The morning questionnaire assessed the participants' else wants me to", "because the situation requires it" (extrinsic regulation), and "because I would feel guilty or anxious if I didn't do it" (introjected regulation). All ratings were given on a seven-point Likert scale ranging from 1 (*not at all*) to 7 (*very much*). Autonomous motivation was calculated as the mean of intrinsic and identified ratings, whereas controlled motivation was calculated as the mean of extrinsic and introjected ratings (Sheldon & Elliot, 1998; see also; Vasalampi et al., 2010). Finally, the ratings were averaged across the goals to create overall measures of day-level autonomous (*mean* α = 0.85 across goals, *SD* = 1.23) and controlled goal motivation (*mean* α = 0.82, *SD* = 1.12).[2]

2.2.2. Academic emotions

The daytime questionnaires first asked the participants about their current emotions (i.e., emotional states). After that, the participants described their current activity in an open-ended response. These responses were categorized as consisting of either (a) activities related to studying/working[1] (e.g., reading for an exam, attending class) or (b) other tasks (e.g., watching TV, having lunch). Based on this, a dummy variable was created (0 = non-academic, 1 = academic situations). From the 2019 daytime beeps completed in total, 884 (43.8%) included academic activities (and emotions), and only academic situations were used in later analyses. All activities were rated in terms of eight emotions using a modified version of the Positive and Negative Affect Schedule (PANAS; based on Watson et al., 1988; see Litmanen et al., 2012). The participants rated "The extent you feel at the moment: …": interested, enthusiastic, determined, and active (four emotions measuring a positive activating state), and anxious, nervous, irritable, and stressed (four emotions measuring a negative activating state). All ratings were given on a seven-point Likert scale ranging from 1 (*not at all*) to 7 (*very much*). Level-specific Cronbach's α for negative activation was 0.71 at the within-day level, 0.94 at the between-day level, and 0.93 at the between-student level. Cronbach's α for positive activation was 0.81 at the within-day level and 0.94 at the between-student level (no latent variable was specified on the between-day level, see the Results section).

2.2.3. Control variables

Depressive symptoms were measured using a revised version of the short Beck's Depression Inventory (BDI; Beck & Beck, 1972). The participants were asked to rate 13 items (e.g., "I often feel sad") on a

[2] Since the students reported up to three different educational goals each

Metacognition Learning (2018) 13:57–90
DOI 10.1007/s11409-017-9178-x

Regulation and socio-emotional interactions in a positive and a negative group climate

Aishah Bakhtiar[1] · Elizabeth A. Webster[1] · Allyson F. Hadwin[1]

Analytical approach

Loosely guided by Braun and Clarke's (2006) thematic analysis, we primarily used a data-driven technique to generate important themes describing the differences between the positive and negative climate groups. We began by documenting general observations of each data source, collected from the beginning to the end of the collaborative assignment. Next, using inductive and deductive approaches, we constructed and refined the coding schemes for the observation data (i.e., chat logs). Upon completion of coding, we examined the fluctuation in codes over time and the convergence between and among categories of codes to generate potential themes. Using all data sources, we iteratively reviewed and defined emerging themes until we reached an agreement that the final list of themes best reflected the differences in the two cases.

Code fluctuations over time To examine the fluctuation of each code over the course of the online collaborative session, we broke the session into equal time segments and calculated code frequencies occurring in each time segment (for total frequencies across the whole session, see Table 7 in the Appendix). For regulatory processes and modes (Figs. 5 and 6), we broke the session into three 30-min segments with a fourth time segment representing

Table 4 Coding scheme for socio-emotional interactions

Code	Description	Examples
Positive interactions		
Apologizing	Apologizing to another member / the group in response to a perceived challenge (e.g., confusion, making a mistake, taking too long, etc.). Could be considered a strategy to promote positive emotional reactions or to reduce or avoid negative emotional reactions.	*Saparna:* I am almost done / sorry *Jing:* im sorry Jay should have told you earlier :(
Humor / laughter	Using humor or laughter to potentially ease tension or create a positive atmosphere.	*Tom:* who's editing? not me because I lost this debate haha
Encouraging participation / motivation	Encouraging or facilitating others' participation by seeking feedback or contributions, promoting eagerness, providing positive feedback, making a polite request or suggestion, or providing reassurance. Also includes motivational or enthusiastic statements.	Seeking feedback *Jessica:* I think that the root of his problem must be [domain contribution]. Do you agree? Then we can discuss how it impacted the rest? Providing positive feedback *Tom:* you did a great job with the planner Polite request *Jessica:* Samir, could you put what is complete into the page and save it so that we can read them more easily and then add anything we think is needed? Providing reassurance *Saparna:* I am almost done / sorry *Angie:* no worries Enthusiasm *Jing:* :D lets get started!
Promoting trust / cohesion	Promoting trust and cohesion by appealing to external factors (e.g., task or instructor directions) to potentially ease tensions or using "we" statements to imply the group is working together or should work together	Appealing to external factors *Tom:* [instructor] says we should be starting our scenarios shortly "We" statements *Jessica:* thanks everyone i think we did a really good job
Negative interactions		
Discouraging participation / motivation	Discouraging participation and undermining task contributions by criticizing another's work, ignoring feedback or questions, or rejecting contributions. Also includes undermining one's own or the group's abilities (low efficacy) and avoiding commitment to the task.	Undermining another's contribution *Jay: [after another member has submitted an answer]:* are we not supposed to use past tense? Low efficacy / commitment *Jay:* I only want to opt out [of being editor] because Im not a super fast typer *Jay:* WE DON'T DISCUSS UNTIL WE HAVE ANSWERED EVERY QUESTION IN THE CHALLENGE, in my opinion?? That was what I intended when we wrote the plan of attack
Low cohesion	Statements that imply the group is not working together or that emphasize the individual over the group. Includes taking personal credit for or emphasizing one's own ideas.	
Pressuring others	Telling another member / the group what to do without asking, suggesting, or being polite. Includes overruling interactions where the member makes a decision for the group or rushes the group to move on without seeking more input.	*Angie:* group plan isnt being graded lets move on! *Jay:* lets goo people / I need your answers >:(
Expressing emotions	Expressing emotions by using emoticons, emphasis (e.g., caps lock,??), or emotion language / expressions.	Emoticon *Jay:* I can be editor I guess....: / Emphasis *Jay:* whos the last person in our group and where are they?? Expression *Jay:* our supervisor said we should be done!! Ahh

Results

Explain clearly and in logical order.

Follow the order of the research questions.

Look for examples.

How you can illustrate your results in Figures, Tables etc.?

Just showing a lot of “raw data” is not results, try to find “generality”.

Think, how your results relate to theory and former research results. However, not discussion yet, just “facts”!

Learning and Instruction xxx (2017) 1–11

Contents lists available at ScienceDirect

Learning and Instruction

journal homepage: www.elsevier.com/locate/learninstruc

The role of daily autonomous and controlled educational goals in students' academic emotion states: An experience sampling method approach

Elina E. Ketonen [a, *], Julia Dietrich [b], Julia Moeller [c], Katariina Salmela-Aro [a, d], Kirsti Lonka [a, e]

respectively.

2.3. Statistical analyses

The data were structured hierarchically into three levels, with situations (i.e., within-day level; $N_{Level\ 1} = 884$) nested in days (i.e., between-day level; $N_{Level\ 2} = 509$) nested in students (i.e., between-student level; $N_{Level\ 3} = 55$). Level one represented the variation of emotional states from one situation to another, and level two included measures of day-specific goal motivation each morning (both intra-individual). We firstly examined descriptive statistics for all variables using an unconditional multilevel model. In order to test Hypotheses 1a and 1b, we also evaluated how much variation in each of the measures could be attributed to situations within days (Level 1), days (Level 2), and students (Level 3). By design, the emotion ratings varied on all three levels, while the goal motivation ratings varied between days and students only, because they were only assessed once per day. In addition, we investigated the correlational structures between emotions on each level. Secondly, in order to test Hypotheses 2a and 2b, we specified two multilevel structural equation models (MSEM; e.g., Marsh et al., 2009) for positive and negative emotions separately, to examine the predictive value of autonomous and controlled motivation. In order to better control both sampling and measurement error and to test the equivalence of the factor structure across levels, we modelled positive and negative emotions as latent factors (i.e., a doubly latent model, see Marsh et al., 2009; see also Dietrich, Viljaranta, Moeller, & Kracke, 2017; Salmela-Aro, Moeller, Schneider, Spicer, & Lavonen, 2016). We specified the models so that the item loadings were held equal across the three analysis levels.

We evaluated the effects of autonomous and controlled goal motivation on academic emotions both on the between-student level (i.e., inter-individual level) and on the between-day level. Inter-individual analyses determine the relationship between variables *across individuals*. Responses are analysed for variation around the group mean, identifying between-person differences. Intra-individual analyses, on the other hand, determine the relationship between variables *across days within a given person*. Responses are analysed for variation around each individual's mean, rather than a group, thus identifying within-person functioning (see Voelkle, Brose, Schmiedek, & Lindenberger, 2014). At first, the models were estimated without control variables. In the next step we controlled for depressive symptoms and life satisfaction to examine the extent to which these variables affected the findings on the inter-individual level (student level). In the MSEMs, goal motivation as well as control variables were used as the manifest

3. Results

3.1. Descriptive statistics

Table 1 presents the means and variances of all items on each level. Overall, the participants chose their educational goals more often for autonomous than for controlled reasons. Moreover, negative emotions were less pronounced than positive emotions in the participants' daily study activities. Table 2 shows the correlations between emotion items on all three levels and between emotions and morning goal motivation scores on Levels 2 and 3. In general, emotions of the same valence were clearly associated across all levels, although these correlations were smaller at the situation level (within-day level) than at the between-day or between-student level. Moreover, while negative emotions correlated invariantly across all three levels, some of the correlations between positive emotions showed differences across the three levels. Interest and determination, for instance, were correlated across situations and across individuals, but the correlation was low across days. The emotions of different valence were mostly unrelated across all levels, or the associations were rather weak (see Table 2). Finally, the low correlations between autonomous and controlled motivation on both Levels 2 and 3 indicates that both constructs seemed to occur rather independently across days and across individuals.

3.2. RQ1: variability in academic emotions

Table 1 provides the intraclass correlations of state emotions (on Levels 2 and 3) and morning goal motivation scores (only on Level 3). Since the ICCs on Level 2 express the relative percentage of how much of the total variation in emotions is (only) between days (not due to situations or persons), and on Level 3 (only) between individuals (not due to situations or days), the percentage of the variation that is left from the total variance refers to pure situational fluctuation (excluding cross-day and cross-person variations). Findings showed that 3–15% of the variance in emotions was due to day (Level 2), and 25–44% due to differences between students (Level 3). Particularly large were the Level 3 ICCs for anxiety

Table 1
Means, intraclass correlations (ICCs) and variance components for academic emotions and goal motivation.

Item	M	ICCs		Variances		
		L2	L3	L1	L2	L3

Academic writing

Academic texts are expected to…

1. Introduce a claim
2. Acknowledge prior work and situate the claim within a disciplinary context
3. Substantiate the claim with evidence and argumentation

→Academic texts understand the past but look to the future. In doing so, they drive the scientific discussion onwards.

Use APA-style from very beginning.

Features of academic language

Informative

The objective of academic language is to inform rather than to entertain.

Formal

Academic language avoids colloquial words and expressions. Also metaphorical or emotive language should be used cautiously. Written texts use a standard written form and adhere to formal guidelines.

Precise and accurate

Facts, measures and times are given as precisely as possible. Vocabulary is used accurately and concepts are defined.

Features of academic language

Objective and reliable

Academic communication is objective rather than subjective. Evidence and justification needs to be presented for claims.

Complex

Written language has longer words, it is lexically more dense and it has a more varied vocabulary.

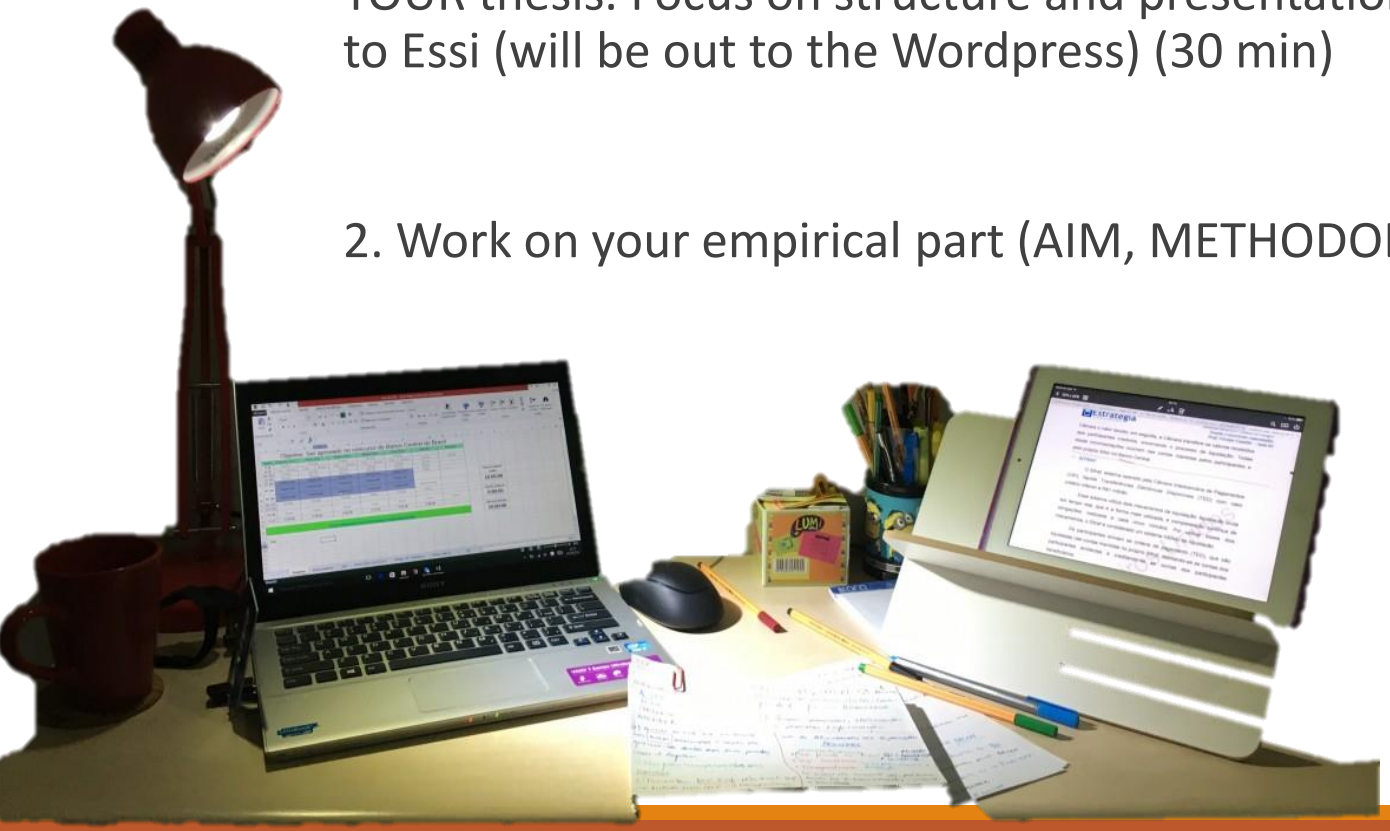
Clear

Ambiguity and obscurity is not a virtue. Good writers avoid long sentences and paragraphs, complex structures and overuse of abstract concepts. Good writers also explain their ideas and their work.

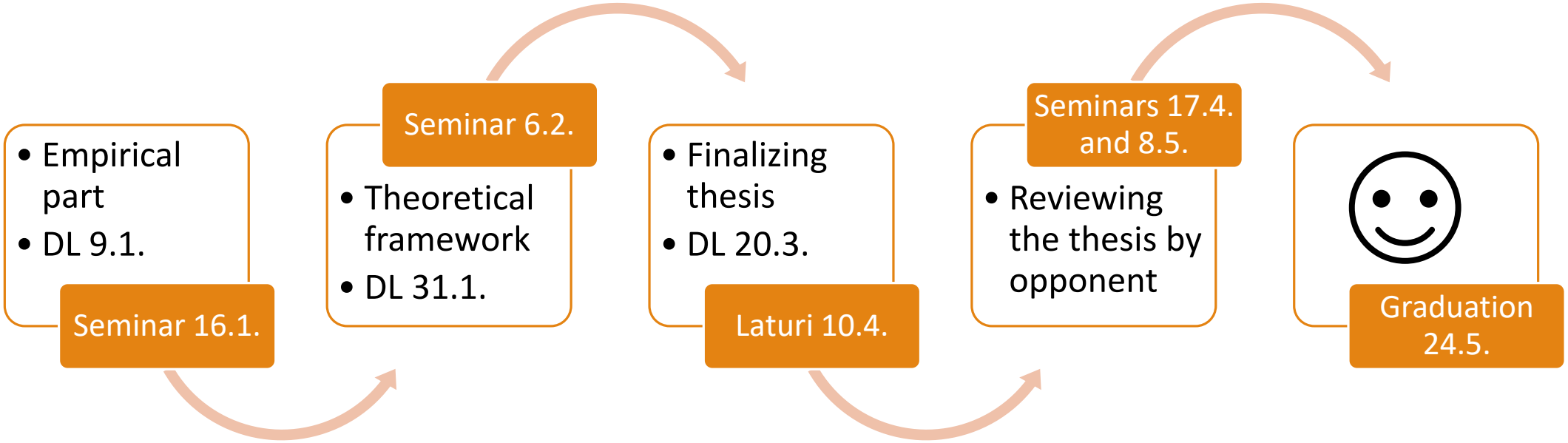
TASK – Find a way to structure and present empirical part of your thesis work accurately and suitably for your research

1. Search few good examples of empirical section /some parts of the articles that would fit YOUR thesis. Focus on structure and presentation, not content! Email your article + your findings to Essi (will be out to the Wordpress) (30 min)

2. Work on your empirical part (AIM, METHODOLOGY, ANALYSIS) (45 min)



Roadmap for spring 2018



Questions?