

“Can I change mine?” Role Experimentation in Adolescents’ Digitally Mediated Social Emotional Learning

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Schools are increasingly focusing on ways to increase adolescents’ self-efficacy in areas of their life from relationships to sleep. Commercially available apps such as mood and sleep trackers may be able to support this process. This paper draws on Rubtsova’s explication of “role experimentation” and on Vygotsky’s reading of Freud to delineate dynamics within adolescent personality development. This theoretical background is utilized in a study of seven 12–13 year-olds in a secondary school in London. Participants used an app designed by other students to track their sleep for two weeks. Their data mediated dramatic situations while discussing their experiences with their peers in the study. This process supported self-reflection and helped participants develop concepts for talking about their everyday life in subsequent one-on-one interviews. In negotiating peer and student roles, participants experimented with scientific and everyday concepts, allowing them to see their own data and the experiences it signified from a new angle.

Keywords: information technology, social and emotional learning, adolescents, experimenting with roles, drama, ideal form.

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Introduction

Drawing on Freud and Aristotle, Vygotsky uses an example from Chekhov’s *Cherry Orchard* to consider how a play affects an audience [35]. Vygotsky asks why the sale of the cherry orchard is such a terrible misfortune for the rich Ravenskaya. “Perhaps she lives permanently in this cherry orchard. But then we learn that she spends her entire life traveling abroad and that she never could or would be able to live on her estate. Perhaps the sale could mean ruin or bankruptcy for her, but this motive falls away, too, because it is not the need of money that places her in the dramatic situation.” Indeed, there is no *instrumental* explanation for the value of this artefact. The selling of the cherry orchard plays a role in a symbolic order familiar to Ravenskaya and Chekhov’s audience. The play works because we invest the cherry orchard with a meaning beyond that directly given in its present material form, as land or real estate:

“The melancholy of Chekhov’s [characters] becomes the emotion of the whole audience because it was to a

large degree a crystallized formulation of the attitude of [wider] social circles...” [39, p. 241].

The cherry orchard helps scaffold what neither we nor Ravenskaya can yet fully grasp: the impact of the contradictions at the heart of being a member of the Russian intelligentsia at the start of the 20th Century. Vygotsky calls this symbolic order an *ideal form* [37]. Yet the example can also highlight that there is something unique about our own experiences within this symbolic order; something we each bring to it. Perhaps the cherry orchard evokes some childhood image of white blossom, the smell of cherry, a painful loss¹.

Aristotelian psychoanalyst Jonathan Lear describes a client who happened to leave the door of Lear’s office slightly ajar at the start of their session. Over the course of his sessions with Lear, the door started to take on a host of meanings:

“Leaving the door ajar meant that nothing he was going to say was going to be so important or private that it should not be heard by someone outside. He longed for us to be working together on a collaborative project, and if we both closed the door, we were a team.

¹ This initial characterization may imply that the ideal form regulates us while remaining beyond our grasp, like the phenomenological concept of background or Bourdieu’s habitus. Vygotsky departs from these regularist [26] theories of social practice. As he clarifies, the ideal form of an activity is produced in reciprocal action [37].

My noticing that he left the door ajar meant that I was sensitive.” [15, p.x]

The door here mediates the drama between real people rather than actors. It was appropriated into the situation to express wider ideas appropriate to the roles of analyst and client. This process gave the client new concepts with which to grasp experiences outside therapy.

Commenting on Freud’s treatment for Little Hans’ horse phobia, Lear suggests “Freud is... giving Hans a set of concepts with which to think about his wishes. This does more than enable Hans to conceive of a reality that existed in toto antecedently to his newfound ability: it enables him to conceptualize his wishes in a certain way. The wishes themselves absorb this conceptualization and thus enter into commerce with secondary-process thinking.”² [ibid, p. 113].

Vygotsky refers to such dynamics as *perezhivanie* (sic. lived experience). Veresov explains *perezhivanie* in terms of the “dialectic between present and ideal forms” [34]³. Lear traces a similar dynamic in Freud’s “dialectic between loss and love”⁴ [ibid, p. 160].

“Psychic structure can continue to develop because the world outstrips my ability to appreciate it. As I develop complexity, so does the world as it exists for me. The internalization of structure can thus continue at ever higher levels of complexity and refinement... what were once taken to be forces of nature, I now recognize as my own active mind.” [ibid, p. 177].

For Vygotsky, this is the process by which humans acquire freedom [38, p. 209]. According to Sévéc, “*Perezhivanie* is [the] cognitive and emotional modification through which the power of the milieu is expressed in the individual, or provides direction for the very power of this individual” [29]. Against the Freudian focus on “active mind”, it should be stressed that for Vygotsky we transform our world in concrete activity rather than in thought.

That an artefact can take on multiple meanings, does not mean that the form of the artefact is arbitrary. Reflecting critically on his earlier work, Vygotsky draws a contrast between a knot in a handkerchief and the diary of an adolescent in how they can act as external stimuli [40, p.275]. Though they can both be mediating artefacts used to direct our own memory, the knot has a direct instrumental function, while the diary’s affordances can implicate far more of who we are: it may be more entrenched in our practices when judged against our whole identity/personality (*личность*) [37].

Role Experimentation in Adolescence

Adolescence is the time of life most characterized by personality development as we negotiate new rela-

tionships and identities [13]. Rubtsova has followed Vygotsky in characterizing this age period as involving “experimentation with roles” [28]. Social situations give adolescents opportunities to engage in “systems of roles” through which to experiment with their own role and identity. As Rubtsova cites Jaroshevsky, “The drama of development [for Vygotsky is not] im-personalized external circumstances, but a dynamic system of mutual orientations, motivations and actions, which has its own “story line” (*plot*) and where personality is shaped as a participant of drama”.

The development of personal identity can also be characterized in terms of *self positions* which become available to individuals when they engage in dialogue with others [2]. However, as Balestra argues, the Bakhtinian notion of *self positions* may not appreciate how such positions develop dialectically through factors like past experience, present activity, and socially available signifiers. Ramos & Renshaw, like Rubtsova, characterize this process through a Vygotskian lens as “the recursive nature of *perezhivanie*” [25]. What these approaches share is an emphasis on identity as developing in collaborative activity and reflection.

Social and Emotional Learning

Although the kind of discursive practice described by Lear has supported adolescents’ autonomy and identity formation in the context of psychotherapy [5], less is known about how such discourses may unfold in educational contexts.

The new Relationships & Sex, and Health Education curriculum in the UK is among the increasing number of strategies targeting youth wellbeing and self-determination. Schools in the UK have a statutory requirement to support adolescents in learning how to make good decisions in aspects of their life from friendships to stress management [8]; however, little is known about how such autonomy can be facilitated in a classroom context [19]. Technology could play a role in the design of such pedagogical strategies. Rubtsova [27; 28] reports on studies in which semi-structured technology use offered adolescents a “training platform” on which to enact ideas, values and other aspects of their identity in ways that could be personally insightful and empowering.

Slovak & Fitzpatrick note that a central challenge for social and emotional learning (of skills such as self-awareness, social awareness and responsible decision making) concerns transfer of the learning to real-life contexts [30]. While activities like group discussions, journal writing, and workshops have proven effective

² Conversely, Vygotsky observes the consequences of lacking such concepts: “There are no concepts and there is no mastery of the self, i.e., emotionally there is the drive to get out, but refracted through the prism of a complex and not a concept, without understanding himself, in the dark, in the twilight of consciousness...” [40, p. 194].

³ Veresov gives an authoritative explanation of *perezhivanie*. This concept has gained recent prominence in research.

⁴ Vygotsky himself draws this parallel after a lecture by Vera Schmidt [40, p. 391].

with teens, less is known about how the skills can be implicated in everyday life. Technology can both support such boundary crossing [1], and encourage independence [9]. Slovak & Fitzpatrick suggest that one mechanism for this could be in "presenting ambiguous cues, which can nudge people to engage, interpret, and reflect on their experiences" [ibid.]

Personally-collected data (about an aspect of a young person's life like their mood, exercise or productivity) can offer just such a boundary object [7; 21]. Some related work has shown that such learning can extend to adolescents' identity formation, prompting reflection about life goals [33], values [22] and socio-political context [31] through constructing narratives about personal data.

The present work reports on a study of self-tracking technology mediated learning framed around sleep hygiene. Good decisions around sleep can aid adolescents in a wide range of life factors from emotional regulation to lesson focus [20]. Building on prior work [23], this study investigates whether manually collected data can support the transfer of concepts from class discussion to everyday life. Discussion of personal sleep habits in a semi-structured classroom setting could offer a *training platform for role experimentation* [28] to support personal insights.

Method

Participants and procedure

The study took place at a secondary school in London during a weekly 40-minute period designated for social and emotional learning and life skills. To frame the study, a class of Year 8 students (12–13-year-olds) were introduced⁵ to digital literacy ideas around personal data, including data privacy and how data could be useful to them. They were introduced to the concept of self-tracking technology [16] and practices of interpreting data visualizations on *LifeMosaic*: a self-tracking app designed by a different group of students in a previous study [23]. *LifeMosaic* is a pictorial daily journal (Figure 1). The class was asked if they would like to take part in a study trialling the app to track their own sleep. Seven participants (3m; 4f) joined the study by returning forms of ascent and parental consent (approved by an institutional ethics board). Study sessions took place in a classroom at the participants' school. Participants were asked to use the *LifeMosaic* app on their smartphone for a week to log how well they slept and anything they thought was affecting or affected by their sleep. At the end of the week, they met with the researcher at a classroom in their school to share anything they learned about sleep from their self-tracking.

During the **discussion session** participants sat in a circle and shared anything they found interesting or informative in the data they had collected in the previous week on *LifeMosaic*. Participants could choose when to contribute to the discussion and whether to show their personal data to others. The facilitator gave prompts and questions and brought the discussion back to the topic of sleep, as well as offering relevant information about sleep when it was appropriate to the participant-led discussion. Participants' comments and queries were allowed to motivate wider discussions without rebuke for error or digression. At the end of this discussion session, participants were encouraged to use the app for a further week, after which they attended a **one-on-one interview** in the same classroom and timetable slot. The interviews focused on whether the participant felt they had gained or learned anything from tracking their sleep and discussing their data.

Data collection and analysis

The discussion session and one-on-one interviews were audio recorded, transcribed and coded with NVivo. Codes were developed with inferentialist discourse analysis [14]⁶. This involved coding inter- and intra-personal anaphora⁷ to identify concepts introduced into

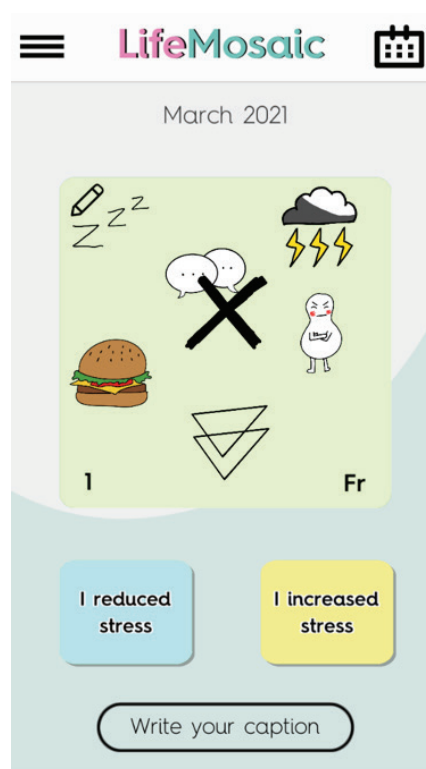


Fig. 1. The LifeMosaic app. Users pick two contrasting factors to track using a colour gradient then add symbols to represent aspects of their day like contexts and triggers.

⁵ The researcher is an English teacher at the participants' school, though these were not his students.

⁶ Derry has shown the many parallels between Vygotsky and this school of contemporary philosophy [6].

⁷ While *deixis* draws on an indexical relationship with aspects of the present situation [12], *anaphora* draws inferences from deixis or other anaphora. This is the contrast between saying "here" and "there", though the inferentialist use of the terms is broader [3; 4]

the discourse. The expansion of concepts was analysed within and between sessions. Expansion was identified through the commitments or entitlements made explicit by participants i.e., reasons and norms given. For example, in the extract, “Do you want to know what I put? I put apples because I ate more healthy.” (Chanel) *I put* is an anaphoric reference to adding sticker symbols onto the app, while eating “more healthy” is an implication of “putting apples”.

Coded transcripts were organized into eight themes and then reorganized into three themes which relate to insights about sleep: *staying up because of technology*, *diet and sleep*, *sleep and stress*. Illustrative vignettes from the discussion session were selected and analysed using the Vygotskian theoretical framework introduced in preceding sections. This analysis is presented below.

Findings

Staying up because of technology

At the start of the session participants were somewhat reluctant to share what, if anything, they had learned about their sleep in the previous week while using the *LifeMosaic* app, with Chanel commenting, “I’m not really sure what to say”. Tom was the first to volunteer a response.

Vignette One

TOM: *Yesterday I went to bed pretty early. About ten thirty. But other nights I stayed up, but usually it’s fine.*

FACILITATOR: *Is that something you learned with the app?*

TOM: *No. Just some days I have good sleep, other days I don’t, so you can just track it.*

F: *Okay and on some nights you had good sleep. Why do you think it was good?*

TOM: *Because if you go to bed early it’s good because then you focus better in lessons.*

F: *Okay and have you found if you go to bed at ten thirty then you focus better?*

TOM: *Yeah.*

F: *Is that what you put on LifeMosaic? Can you tell us a bit about your data?*

TOM: *I put it a bit blue because I’m still tired a bit and then on other days when I went to bed later then I’m obviously more tired.*

F: *Okay. Is there anything else you noticed from your data? Did you use stickers?*

TOM: *No.*

F: *That’s okay. So on some of those days where you stayed up later, did you notice anything?*

TOM: *So, Tuesday I put it as dark blue because yeah, I was really tired on that day. Like yeah I was literally falling asleep. Yeah, and I don’t even know. I just go on YouTube usually.*

CHANEL: *Yeah same.*

F: *That’s interesting. How many of you stay up late because of YouTube?*

CHANEL: *Yeah, because you get sucked in. Yeah, so if*

you watch something and you have certain channels that you follow and then you just watch them.

Tom begins this vignette referring to *sleep* and *tracking* in the abstract, as scientific concepts [36]. In giving “because you focus better in lessons” as a reason for having good sleep, he seems to be trying to offer *the right answer* in his role as student, rather than reflecting on his own experience. While at first Tom does not refer to his own data or make any inferences from it, being prompted back to the data introduces contradictions with his story line. By the end of the vignette, a data visualisation Tom is looking at on his phone offers a “ticket-to-talk” [32] for Tom to expand and personalize his story, seeing new significance in the data. Once Tom negotiates a role in which he can introduce everyday concepts, his peers are brought into the discourse through the frame of this ideal form. They are keen to identify with Tom’s story, offering their own experience of staying up because they are watching Netflix in bed or are too distracted with their phone to finish homework. In his follow-up interview, Tom proposes that self-tracking can “give you a different perspective on [sleep]”. Asked if he now feels differently about his sleep, Tom refers back to his reflection in the discussion session, suggesting “...if I stay up on my phone I might not stay up as late or I might keep it in mind.” Tom did not initially make inferences about his phone use from his self-tracking data but the process of discussing and justifying the data established this connection.

Diet and sleep

Although Ali had not used the app every day, he was keen to show his data visualizations to the group on the days he had collected it. He had added several symbol stickers (Figure 1) to his daily tiles and explained the meaning of some of them during the discussion, with the topic of diet becoming prominent.

Vignette Two

ALI: *I don’t know if it was this one or Friday.*

F: *Right so the darkness is how tired you were and was there anything else you noticed in terms of your data?*

ALI: *So, I put burgers because I went to Sam’s [fast food chain].*

Several participants laugh

CARLY: *You always go Sam’s.*

F: *Do you think that was related to how you were feeling?*

ALI: *Yeah, because if you get stressed you eat.*

F: *That’s really interesting, can you explain?*

ALI: *Just because you’re stressed so you want to buy yourself some chicken.*

CHANEL: *Can I say?*

F: *OK quickly.*

CHANEL: *It’s called comfort eating because if you feel bad you eat food to give yourself a treat.*

F: *That’s really important yeah. Do you think that’s a good idea?*

CHANEL: *Obviously no because it could be unhealthy.*

ALI: *In small quantities.*

F: *Right so you can treat yourself to junk food once in a while in small quantities. But do you know actually your sleep does affect what you eat a lot. You're a lot more likely to eat junk food if you sleep badly and if you don't get enough sleep on a regular basis it can really affect you having a healthy weight.*

DHARMA: *Sir, on mine I actually put a burger on the days I didn't sleep.*

F: *That's really interesting.*

POPPY: *I think it affects your self-control.*

Ali has added a chicken drumstick on one of his daily logs on *LifeMosaic* to signify Sam's Chicken Restaurant. He does not suggest any association between this and his sleep. Mentioning "Sam's" makes others laugh because of its significance in his peer group: it is a hangout spot for Year 8 boys, as Carly acknowledges. Ali continues in this joking role with his peers in suggesting that he eats chicken when he is stressed, when invited to justify the relevance of his initial assertion. However, when Chanel takes up the role of a student with valuable knowledge about "comfort eating", Ali now genuinely attempts to justify his past activity. Chanel has potentially judged his visit to Sam's as *unhealthy* or *comfort eating* and Ali negotiates with his story against this new ideal by saying it is acceptable "In small quantities." In treating Ali as if he is contributing to a practice of learning about sleep, he and others are able to recognize this role and its wider social value. In interviews, Chanel and Ali refer back to the link between diet and sleep, with Ali suggesting he learned about "...things that affect your sleep, or you don't sleep and then you just want to munch."

Over the course of the discourse in this vignette, the group expanded their understanding of concepts related to diet and sleep. Though it's unlikely that a correlation between diet and sleep would be visible after a week of tracking in Dharma's data, her suggestion that she "put burgers on the days [she] didn't sleep" suggests that these are concepts she could adopt to reflect on her experiences in future. The inter-personal data-mediated dynamic arguably made the participants more receptive to hearing relevant information about sleep hygiene from the facilitator, and later helped Poppy to make sophisticated inferences about how low sleep could affect impulsive behaviours.

Sleep and stress

The group discussed factors which affected their sleep as well as factors which were affected by sleep. Stress and emotion were often referred to. Dharma showed the group a visualization of her day and explained what the symbol stickers she has been using signify.

Vignette Three

DHARMA: *Yeah, like I said if I was out with my friends or I had a lot of homework. That's the book one.*

F: *Okay, so you used the book for homework and then another one...*

DHARMA: *Yeah.*

F: *And do you think those affected your sleep?*

DHARMA: *Erm, well I think it definitely affects it. Yes, because on Wednesday I had a lot of homework so I stayed up doing that and on a day you have a lot of homework you might stay up because you have to do it.*

F: *Okay, so that's why you were tired on Thursday?*

DHARMA: *I think so. I sometimes do it in the morning. Or, basically if you have a lot of homework you get stressed because you know you have to do it.*

F: *Definitely. So, you think the stress affected you?*

DHARMA: *Yeah. I thought it would show like...*

F: *You thought the data would show it?*

DHARMA: *Yeah. But I know stress affects me though.*

F: *But your data didn't show it?*

DHARMA: *No. Can I change mine?*

F: *Yeah.*

DHARMA: *So basically, on Thursday something happened in school so that's why I put stressed and friends. So, I think that affected me and I put that one.*

F: *Okay and then now you don't think homework affected you?*

DHARMA: *Not affected. No, like obviously if you stay up and you're tired it affects you but not in that way. Like if something happens it's going to affect you more. So, I think friends is more important than homework... If I don't sleep, that is probably why.*

In this vignette Dharma is explaining why her sleep on some nights was much worse than others. Dharma moves from a first-person focus on the particulars of what she was doing to the perspective of an ideal "you" who comments "you have to do it... you know you have to do it", evaluating her actions as conventional or appropriate within a wider system of norms. Though Dharma is keen to clarify and justify her past activity, as she develops her story line, the flow of the narrative is broken when she is unable to use her *LifeMosaic* data to illustrate her point. Dharma seems to perceive her role as giving testimony to something she needs permission to "change". The contradiction between the initial story line and the data reveals new layers of complexity: the word "affected" now proves inadequate in expressing this nuance. Dharma is led to evaluate the significance of dissimilar aspects of her experience against a broader evaluation of her life. The metonyms of "homework" and "friends" in the narrative correspond to symbol stickers to which she assigned these labels on her app. In her subsequent interview Dharma showed a visualization on *LifeMosaic* in which symbols participated in a complex system of meanings: "I [tracked] sleep but I did like different things, either if it was good and then it affects you so I did the sun as well... or on this one it's more dark where I didn't sleep that good and you can see I didn't do that much, and then as well you can see I was stressed."

Although the exchange in Vignette Three was between the facilitator and one student, another participant (who was reluctant to contribute to the group discussion) appears to have appropriated some of Dharma's concepts into her own practice while collecting her own data independently:

Vignette Four

F: *Okay and you tracked your sleep? And did you learn anything about your sleep?*

SARAH: *Like stress. If you don't sleep you feel stressed.*

F: *Okay and is that something you noticed or was it from the last workshop?*

SARAH: *Yeah workshop.*

F: *And do you think it's relevant to you?*

SARAH: *Yeah, if I don't sleep, I put a cloud because I feel stressed or lightning, or yeah.*

F: *Great and those were things on LifeMosaic about stress?*

SARAH: *Yeah, and I put friends and like I tried to use different ones.*

F: *OK and the symbols mean you're stressed?*

SARAH: *I just do it for how I feel depending on sleep or like anything.*

F: *And the different stickers are different feelings?*

SARAH: *Yeah.*

When Dharma made the insight that “friends are more important than homework” in Vignette Three, there was a sense of recognition from other participants. Participants referred to “friends” multiple times in the antecedent discussion, as a factor affecting sleep and wellbeing. It is also noteworthy that while Sarah’s interview answers are fairly limited and she is reluctant to take on the kind of storytelling role adopted by Dharma, Sarah can nonetheless use her data to express a complex and nuanced set of personal experiences. Dharma’s stories may have helped model this complexity for Sarah and others.

Discussion

The case study analysed in this paper explored young people’s use of a manual self-tracking app to investigate whether practices mediated by this technology could support social and emotional learning skills, including self-awareness, social awareness and responsible decision making. The findings suggest that self-tracking technologies and practices may help young people to reflect on their everyday experiences and to make personally relevant insights, which could support decision making. The process of collecting and discussing personal data may contribute to the development of skills and strategies for self and social awareness and problem solving.

While prior work bringing self-tracking technology to the classroom has often focused on the transfer of specific curriculum content [24], the discursive nature of the present study blended adult instruction with youth exploration of concepts the participants themselves found valuable or intriguing. Though the study focused on the topic of sleep, participants also reflected on other curriculum-relevant topics such as diet and stress. Future work could investigate this pedagogical approach with other kinds of self-tracking e.g., mood, physical activity, or even metrics relating to arguments the young people got into. Such work

will need to consider how it can maintain student autonomy over the self-tracking practice while creating a space in which students are safe to experiment with roles and share personal insights.

It should be noted that the concepts offered by participants in the one-on-one interviews are limited in the extent to which they can be called *spontaneous*. That participants referred to themes from the discussion session of a week earlier is not adequate to establish whether they had integrated this knowledge into their everyday practice. This is not a major limitation as the focus of the study was on learning rather than development. Where the study activities did appear to aid development was in students’ abilities to form cogent self-narratives involving knowledge about sleep. The impact of such learning on broader development within the adolescents’ everyday life practices is a topic for future work.

In experimenting with roles as students and members of peer social groups, participants took on various vantage points on the same data. The data provided a useful object of inquiry [7] to bring participants’ contributions into the right social situation for learning relevant concepts.

As Vygotsky argues, while everyday concepts make learning personally meaningful, scientific concepts help to organize everyday concepts [36]. The participants in this study blended scientific and everyday concepts in creative ways to form new links, expanding their concepts.

Introducing self-tracking data into discourses about sleep habits proved effective at scaffolding learning. In interviews, participants did not simply regurgitate the knowledge imparted by the facilitator but explained what they learned, contextualizing it in their own experience. Some now challenged rather than reaffirming the concepts introduced in the group discussion; for instance, Dharma suggested that she would continue using her phone in bed if it could help her feel less stressed before sleep. Abstracted concepts like “If you go to bed early it’s good because then you focus better in lessons” had expanded into a wider system of related and personally relevant concepts, which the young person evaluated against their sense of identity/personality as a whole.

The present work has suggested some points for exchange between Vygotsky and Aristotelean Freudianism. One should note Vygotsky’s comment that “one can work with Freud’s method without being a Freudian.” [40, p. 484]. While this paper has illustrated some points of convergence with Freud’s theories, it also diverged from them in important ways.

For Freud, meaning is within us and “oozes out of [our] every pore” [11]. Every word, gesture or Rorschach ink blot can reveal hidden significance. As Macintyre argues, there is a danger that such interpretation brackets out the role of the psychoanalyst in meaning

making in a way that can obscure the ways in which she gives the concepts with which the client explicates meanings⁸. What is "repressed" in the mind of the client could equally form in the discourse between them and the psychoanalyst [17].

The present study showed that, unlike an ink blot or a knot in a handkerchief, self-tracking visualizations have affordances that make them publicly available in ways that can contradict the interpretations of their user. We saw how this happens through a process of justification and clarification between interlocutors. Yet like a Rorschach, the data supported participants in working through their own nature and past experiences.

Macintyre's interpretation of Aristotle may be helpful in tying these threads together:

"Reflective agents increasingly understand themselves and others in terms of a certain kind of narrative, a story in which they as agents direct themselves or fail to direct themselves toward a final end, the nature of which they initially apprehend in and through their activities as rational agents. Progress toward that final end is marked by slowly and unevenly increasing self-awareness and self-knowledge, so that agents become better able to understand what in their past has gone well and what has gone badly in their own lives and in the lives of others with whom they have interacted and why." [18, p. 54].

By collecting data about themselves for the purpose of later reflection, on their own and with others, participants framed the data, and thus their own activities, in particular ways. The data scaffolded adolescents' reflections by acting as memory cues as well as expressions of what they judged to be significant in their everyday lives. The act of sharing their data with others prompted them to experiment with roles in which they could make sense of their past and create narratives to explain their deci-

sions. The fact that the data were shared objects of inquiry meant that the narratives could be contested or reinterpreted by others, prompting the storyteller to offer further justifications. This led to some richer and more concrete learning experiences than is typically found in learning instruction for social and emotional learning in secondary schools [10]. Participants were keen to exercise skills relevant to the development of their identities. Through its appropriation in social practices of interpretation, personal data on the *LifeMosaic* app took on new meanings which could allow future reflection to happen with greater levels of granularity.

Conclusion

Creating a space for adolescents to discuss their self-tracking data can offer a training platform for role experimentation and support self-understanding. The concepts participants applied to their self-tracking data were intimately connected to the roles they adopted in presenting themselves to their peers and the adult facilitator. When the data posed contradictions with the narrative by which they justified their past actions and experiences, the adolescents in the study took on new roles; they moved between roles of student, friend, Year 8 boy, and others to try to tackle the incongruities. These contradictions were explicated through semi-structured discussions which allowed students to make connections between abstract concepts and their everyday life. The data offered auxiliary signs that could help to cross the boundary between home and school. Initiating young people in self-tracking practices proved an effective pedagogical strategy for broaching challenging topics and skills related to social and emotional learning.

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«Можно ли это изменить?»

Ролевое экспериментирование подростков в процессе дигитально опосредованного социально-эмоционального обучения

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Данное исследование опирается на идеи О.В. Рубцовой о «ролевом экспериментировании», а также на основные положения теории, объясняющие динамику развития характера подростка в интерпретации Л.С. Выготского. Это теоретическое обоснование лежит в основе исследования семи 12–13 летних подростков из средней школы в Лондоне. Участники эксперимента в течение двух недель использовали приложение, созданное группой учеников. С помощью этого приложения участники эксперимента могли выявить «драматические ситуации» и обсудить со

сверстниками из группы свои ощущения и переживания. Благодаря возможности обсуждать с другими волнующие их вопросы, подростки развивали способность к самоанализу, формированию понятий. Этот процесс способствовал развитию самосознания. Обсуждая роли сверстников и учеников, участники экспериментировали с научными и житейскими понятиями, что позволило им увидеть значимый для них опыт под новым углом зрения.

Ключевые слова: информационные технологии, социально-эмоциональное обучение, подростки, разыгрывание ролей, драматическая ситуация, идеальная форма.

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