THE APPLICATION POSSIBILITIES OF THE AGILE PROJECT MANAGEMENT MODEL IN IMPLEMENTING INTERDISCIPLINARY INTEGRATION IN UPPER SECONDARY SCHOOLS

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ABSTRACT

The Lithuanian Progress Strategy 2030 and related educational policies emphasise the need to prepare students for a dynamic world filled with challenges and opportunities. This necessitates the improvement of educational content through a competency-based approach that transcends traditional subject boundaries. Implementing interdisciplinary integration requires a holistic combination of knowledge, aligned with student interests and societal needs. Teachers are granted autonomy to design and adapt subject content to meet educational objectives, although this demands both time and specific competencies. Effective interdisciplinary teaching depends on collaborative practices that deepen understanding and enhance skills. Characteristics of transformational leadership, such as trust based on shared values and leading by example, are crucial for improving the quality of education. These values underpin the Agile project management model, which is designed for goal-oriented collaboration amid uncertainty. However, the Agile methodology is not yet widely applied in Lithuania's education system. This study aims to explore the potential of Agile methodology for facilitating interdisciplinary integration in a gymnasium.

KEY WORDS: *interdisciplinary integration, Agile methodology, team, gymnasium*.

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Introduction

A rapidly changing society requires educational institutions to continuously rethink the structure of educational content, the role of the teacher, and the management and collaboration models used (Kamp, 2019; Simões, 2024). There is an increasing emphasis at both national and international levels on the function of the school as a learning community, in which teachers act as innovators, agents of change, and team members contributing to the improvement of education (Lithuanian National Progress Plan 2021–2030, 2020).

Interdisciplinary content is one of the strategic orientations of modern education, enabling students to better understand the real world by linking knowledge from different disciplines. Research shows that this form of education not only enhances students' competences in inquiry and critical thinking, but also improves their preparation for future careers (Niemela, 2022; López-Alcarria, Olivares-Vicente, Poza-Vilches, 2019). Updated general education curricula allow teachers to develop more flexible content and individualise teaching and assessment methods (Jonker, März, Voogt, 2020).

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Effective interdisciplinary integration requires a collaborative team of teachers. As is outlined in the 'Education 2030 Learning Compass', there is a need to strengthen the relationships between teachers and their collective responsibility in the implementation of cross-cutting projects and educational innovation. Support and encouragement from leaders to share responsibilities is becoming a key factor in introducing new practices (UNESCO, 2016; Education Issues Analysis, 2021). The contemporary reality of education requires not only integrated content but also a flexible and adaptive management model. Agile, a project management model that has evolved from the IT sector and has been successfully applied in the field of education, can be such a model. The Agile methodology is distinguished by its orientation towards co-creation, knowledge sharing, and team self-management. According to Cockburn and Highsmith (2001), the model helps to overcome challenges through short iterative decision cycles, promoting team reflection and learning. Noguera et al. (2018) highlight that Agile methodology is effective in both project management and exploratory activities in school.

The aim of this paper is to investigate and present the applicability of the Agile project management model in the implementation of interdisciplinary integration in a gymnasium. To achieve this goal, an empirical study was carried out in the form of focus group interviews with teachers and methodology group chairpersons (N=6) from a gymnasium in the city of X. The data were analysed using thematic analysis (Nowell et al., 2017) and the insights gained formed the basis for the development of recommendations for the adaptation of the Agile model in the gymnasium.

Specificities of organising interdisciplinary integration in schools

One of the most important goals of modern education is to prepare students for life in a globalised, ever-changing society. This requires not only updating the content of education, but also rethinking how it is delivered. Interdisciplinary integration is becoming one of the key principles for making educational content more meaningful, coherent and relevant to real-life situations. It is not just about connecting subjects, but about a holistic view of student learning and personal growth. Interdisciplinary integration in school allows for meaningful thematic links between different subjects. It is based on the notion that knowledge is not about isolated entities, but interrelated phenomena that students need to be able to interpret in different contexts. Gerulaitis, Jevsejevienė, Poderienė and Raudienė (2019) emphasise that in modern schools, teachers need to work collaboratively to deliver the content of education in a way that is coherent and integral. This requires not only methodological preparation, but also cultural change in school communities themselves.

Models of interdisciplinary integration have been developed steadily over the last few decades. Drake and Burns (2004) proposed that integration can be divided into three levels: multidisciplinary, interdisciplinary and transdisciplinary. In the first case, subject frames are maintained, but connections are sought; in the second case, the subject connects several disciplines; in the third case, disciplinary frames are blurred, and learning takes place through universal contexts. This classification allows schools to choose the most appropriate depth of integration according to context, resources, and community readiness.

Fogarty and Pete (2009) extended these models by emphasising the role of students in integration and the impact of the school's organisational culture. Contemporary didactics, as Pačiuliauskienė, Valantinaitė and Malonaitienė (2013) point out, is based on diverse forms of integration, ranging from problem-based and thematic to conceptual. However, even the best methodological solutions require systematic management. The analysis of recent research on the organisation of interdisciplinary integration in school reveals that the Agile project management model is increasingly being used as an effective method for organising interdisciplinary learning, especially in pupils' project-based activities. Research shows that the Agile methodology helps teachers to act as autonomous teams, plan educational content flexibly, respond quickly to changing circumstances, and promote student engagement (López-Alcarria et al., 2019; Guerrero-Vásquez et al., 2024; Noguera et al., 2018). Moreover, the model is based on an iterative process and a culture of feedback, which is crucial for the development of integrated, competency-based education (Cockburn, Highsmith, 2001). The Agile methodology, which originated in software development, is increasingly being applied in education. Stewart, DeCusatis, Kidder, Massi and Anne (2009), and Dewi and Muniandy (2014) have shown that the

model helps students to collaborate, plan, and reflect in the learning process. Studies by Bergmann and Karwowski (2019), Paez (2017), and Lu and DeClue (2011) show that Agile has been successfully applied in project-based learning, especially when the emphasis is on student autonomy and group work.

Agile methodology is based on 'learning sprints', short, goal-oriented cycles of activities that include planning, implementation, evaluation and reflection (Guerrero-Vásquez et al., 2024). This structure is particularly suited to interdisciplinary integration projects, when students work on one broad topic, drawing on knowledge from different subjects. For example, research on climate change may involve geography, chemistry, ethics and computer science.

The learning sprint consists of five steps:

1. Formulating goals and breaking them down into achievable objectives.
2. Planning: allocating activities, responsibilities and time.
3. Discussion: short daily meetings to discuss progress.
4. Evaluation: assessing the tasks completed.
5. Reflection: analysing personal and team actions (Guerrero-Vásquez et al., 2024).

This cycle not only allows us to structure the projects, but also to ensure that the students grow as independent, collaborative individuals. This is in line with the modern model of competency-based education, where it is not only the amount of knowledge that matters, but also the ability to apply it.

The Agile model also includes elements of transformational and shared leadership. In a modern school, the leader is no longer the sole decision-maker or control centre, but becomes a facilitator, a person who supports the team, facilitates problem-solving, initiates reflection, and motivates educators to act creatively (Ghamrawi, 2024). This approach empowers communities of teachers to act as autonomous, collaborative teams that develop, test and adjust educational content and methods in response to students' needs and changing contexts (Lei, Cheah, Wong, 2024). Transformational leadership in educational institutions promotes visioning, values-based communication and empowerment, the leader becomes not only an organisational strategist but also an emotional and cultural leader, mobilising the community towards a common goal (Shields, 2010). The shared leadership model is because responsibility for decisions is distributed among all members of the team, giving everyone the space to participate in leadership, decision-making, initiating change, or creating educational innovations. This structure allows for the principles of the Agile project model, flexibility, adaptability, iterative and collective responsibility, to be implemented.

Research also shows that both transformational and shared leadership have a positive impact on the responsiveness of organisations to educational change, enhance teachers' professional engagement, and foster the renewal of school culture (Ghamrawi, 2024; Lei et al., 2024). The shared leadership model emphasises the horizontal nature of decision-making and the allocation of responsibility, with each team member having the opportunity to influence the process (Spillane, 2005). Educational research shows that such leadership models are particularly effective in innovating and creating a school culture that is conducive to learning (Harris, 2014).

The Agile model is supported by the physical educational environment. Adam (2023) recommends the creation of Agile workspace-type spaces that allow for rapid furniture rearrangement, the use of a variety of visual aids, and the encouragement of more agile and inclusive working. Such environments encourage teamwork and reflection, which are essential in interdisciplinary integration. Research shows that as many as 83.5% of the sources analysed (Salza, Ferrucci, Musmarra, 2019) rate the Agile method as a learning methodology. It allows students to delve deeper into project-based learning, work in teams, and become more aware of their progress (Duvall, Hutchings, Kleckner, 2017; Noguera, I., Guerrero-Roldán, Masó, 2018). Students become active participants in their own learning process through Agile methodology, which fundamentally changes the traditional 'teacher teaches, student listens' model (Paez, 2017; Popa, 2023).

In summary, the Agile project management model helps implement interdisciplinary integration smoothly. It enables the development of inclusive, structured, learner-centered educational processes that adapt to changing learning environments. The methodology can serve as a bridge between strategic educational reforms and everyday educational practice in the school.

1. Methodology

A qualitative research methodological approach (focus group discussion) and thematic content analysis were used to reveal what aspects of the concept of sustainability in STEAM projects (their content and organisation) are highlighted by prospective primary school teachers. This research approach allowed us to identify the teachers' attitudes towards the relevance of organising interdisciplinary integration in the gymnasium, the peculiarities of teachers' implementation of joint teaching and learning projects, and the links with the Agile project management model. The research was carried out in the 2024school year. The study used a criterion sampling method, which allowed us to select informants based on the characteristics relevant to the research problem. The participants were teachers who have more than five years of experience in implementing interdisciplinary integration projects and who are actively involved in the school's methodological group (or are leaders of a methodological group). The paper presents the opinions of the participants in one focus group interview on the following topics of discussion: current issues of interdisciplinary integration in the gymnasium; the concept of interdisciplinary integration; directions for the improvement of interdisciplinary integration in the gymnasium. Six teachers participated in the study (N=6). The duration of the discussion was 90 minutes. To ensure the ethics of the study, informed consent was obtained from all the study participants, and the information was encrypted. The informants' responses were used for data analysis purposes only. In the results section of the study, the names of the informants are not included in the quotes from the interviews. Thematic content analysis was used to summarise the research data. The results of the study were processed using manifest content analysis. They were interpreted and supported by the collected data and textual evidence, which allows us to interpret and draw conclusions based on the analysed text (Žydžiūnaitė, Sabaliauskas, 2017; Winlow, Simm, Marvell, Schaaf, 2012).

2. Analysis of the results of the focus group interview study

The focus group interviews allowed us to observe teachers' engagement and reasoned discussion about what teachers are already doing in this field, and what can be done to make interdisciplinary integration in the gymnasium more successful. It was noted that the participants felt that what was being done was no longer meeting the needs of teachers and pupils, as the need for trap-disciplinary integration was repeatedly expressed: '...more interesting', '...better', '...more effective', etc. By complementing each other's answers, the participants were also able to express their doubts about already tried and tested methods of collegial cooperation (the creation of a thematic grid of lessons), and to share ideas for the better organisation of interdisciplinary education. Teachers who took part in the discussion stressed that interdisciplinary integration is important for students' deeper understanding of the content of the subjects, and stressed the importance of teachers working more closely together, both in planning the content of the curriculum in long-term plans and in planning specific lessons in the subject.

Differences of opinion emerged in the first topic on the concept of interdisciplinary education (Fig. 1). Teachers considered interdisciplinary integration to be thematic integration, integration of learning methods, and competency-based education.

The invited informants represent methodological groups from different subjects, and can therefore share information not only about themselves but also about the integration carried out by their colleagues, e.g. '...a certain part of the educational process, a seamless part, and an education where the same competences are developed in all subjects'; 'Interdisciplinary [...] is when teachers from different subjects cooperate, when they combine their activities into a seamless activity.' Also, the understanding of interdisciplinary integration is linked by the panelists to thematic integration: 'I understand integration as the exposure of a single theme to several aspects, especially to look at the same theme from some disciplinary points of view.' The diversity of perceptions of interdisciplinary integration among the members of one school's teaching community is evident.

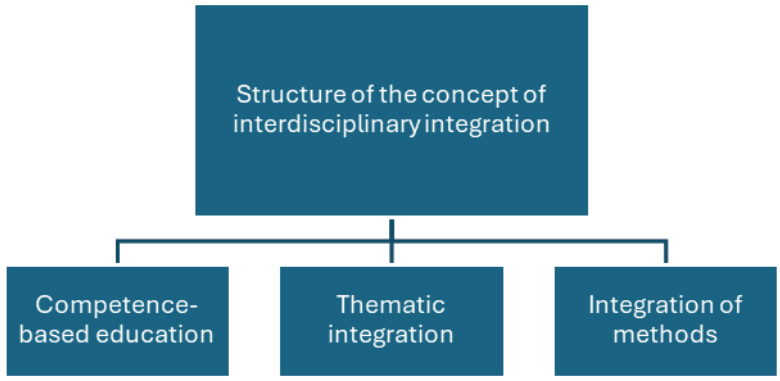

Figure 1. The diversity of perceptions of interdisciplinary integration in grammar schools (focus group N=6)

The second theme highlighted the participants' perceptions of the main obstacles in organising interdisciplinary education in a gymnasium. The main obstacles identified in this theme are:

- Lack of a common vision for the organisation of interdisciplinary education in the gymnasium: 'I cannot integrate with the history teacher all the time, so I prepare methodological material and I also teach extra [...] to do one lesson with two people, which is actually very difficult...'; 'I have to admit that, for example, doing one lesson with two people is really very difficult...'; 'I think it's just like English, music and maths, it's everywhere, so I would agree with my colleague, you meet people, you interact with them, and a lesson can be created. You can look for integration everywhere'; 'Another thing I've been waiting for a long time, when will they ever make an educational model where all the themes are the same across all subjects'; 'I can't plan those hundred and eighty lessons with integration.'
- Organisational solutions within the same subject group. There is a lack of better knowledge of the specificity of the didactic work of colleagues, and a lack of consistency in the planning of educational activities: 'This process is organised by the chairpersons of the methodological groups, who provide for planning in their annual plans and set dates, which might be when there is less formal business, when there are no inspections, there are no exams, there are no control papers. February, October or June is the most suitable month for integrated activities'; 'If this is an interdisciplinary integration, of course, then in the methodological groups, again by agreement, teachers decide which subjects will be integrated, and this is already recorded in the protocols of the methodological group'; 'In methodological groups, you come to an agreement or, as has been said here, you meet the person, and you understand what you want to do with them or not'; '…observe at least two lessons from a colleague. To do this, you need to show yourself, then you demonstrate and someone else can come to the lesson. When you want to show, you want to make it more interesting, and then automatically those thoughts come.'

In the third theme, the participants made suggestions for the proper organisation of interdisciplinary education in the gymnasium (Fig. 2):

- Managerial solution (collegial planning, shared leadership): 'Establish a working group to take care of integrated lessons, create a grid of themes and the integration of the calendar holidays'; 'Every teacher would benefit from not having to run through the whole staff looking for information'; 'Teachers, for example, see an interesting topic, suggest it to a colleague and their agreement turns into a beautiful result, an open lesson, an event, a project.'
- Information management tools and instruments, documents: in the Gymnasium's Annual Activity Plan; in the long-term subject plans; in the electronic diary; in the documents of the Methodological Council, etc: 'In our long-term plans there are notes. I sometimes think, in terms of the plans from my life experience, I can write down those integrations just for the sake of having someone come and

look, it is written'; 'In the long-term plans we mark there is a section where it says integration'; 'If a teacher does a cross-curricular integration, if a lesson is integrated, it is recorded in the electronic diary.'

Personal initiative: 'As there is no forced integration, decisions are taken on a collegiate basis. Every time an initiative arises and is negotiated and agreed upon, it is organised'; 'The decision is taken by the teacher, who is proactive and who wants it'; '[...] it is more interesting to integrate and easier at times. We decide for ourselves.'

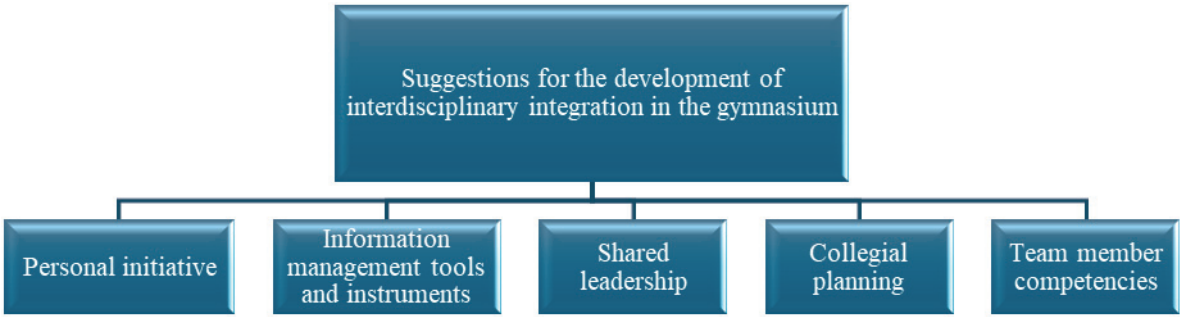

Figure 2. Suggestions for the implementation of interdisciplinary integration in a gymnasium (focus group N=6)

Many of the teachers who took part in the discussion agree that personal choice is key to interdisciplinary integration. On the other hand, in gymnasiums, the working group sometimes has to take the initiative, for example in the development of the annual action plan, in the discussion of forms of dissemination of team decisions, and in the recording and presentation of information. According to the interviewee, the working group is made up of the chairpersons of the methodological groups and a few proactive colleagues, who usually know the ideas of their colleagues and decide which activities or forms to use for interdisciplinary integration. Most teachers see the importance of shared leadership, as they have shared the responsibility for implementing interdisciplinary integration with other teachers or institutions: 'I had to prepare tasks in the public library. It has a music room, and a classroom. I had to prepare the tasks there, and the librarians themselves worked with the pupils. They had additional education....'

Based on the ideas expressed by the informants, the focus is on leadership and the competences of teacher team members. Several participants pointed out that the leadership should be taken by the methodological group, the experience group or the person in charge, the 'leader', because teachers need a guide: 'There was a leader and a substitute.' A teacher expresses the observation that he would like to have a freely available information tool with the topics of his colleagues' lessons: 'There would still be a need for some kind of tool. You go to the grid, look around and that's it. Because for one person, or to go to that person and ask them to look for you...'

Focus group participants noted that effective planning of educational time is essential for interdisciplinary integration: '...When it comes to these integrated lessons, the problem is with time. One teacher has to leave his/her class and be in another class with a teacher of another subject, or to coordinate so that the two classes fit together [...].' In this case, it is very difficult to organise interdisciplinary integration with two or more teachers at the same time, because it is difficult or impossible to coordinate the teachers' timetables in such a way that the class concentrations fit the integration.

The importance of teachers' competences in the implementation of interdisciplinary integration is highlighted, and a panelist remarks: '...since the updated curricula aim to develop competences [...]' the use of interdisciplinary integration in the classroom will help to achieve the objectives of the general curriculum in terms of competence development.

To summarise the teachers' statements, they express the need for an interactive information management tool: '...that tool, because we are moving towards modernity, if there was a calendar of holidays on the school website or a document on the themes of the lessons, which would help to express personal initiative in the planning and implementation of the interdisciplinary integration.' The Agile methodology was welcomed by the panelists as a way of implementing structured step-by-step integration. The model's sprint logic (goal-plan-action-reflection) seemed to them to be appropriate for organising short-term joint projects.

Based on the results of the study, it is proposed to implement a model for organising interdisciplinary integration based on the principles of Agile project management. It is recommended that a proactive team of teachers be set up to iteratively plan, implement and reflect on the integrated activities. Such a model would allow for the systematic organisation of lessons, strengthening collegiality and the integrity of the educational content. The principles of iteration and sprints would help avoid chaotic behaviour and ensure consistent progress in students' learning. Given the challenges highlighted in the study (lack of time, lack of coordination and fragmentation), the Agile methodology would provide a structure in which each teacher would know his/her role, and decisions would be taken in a collegial manner. The success of the model requires the support of the school management, a culture of reflection, and clearly defined objectives. The implementation of the Agile methodology would promote creative educational practices and increase student engagement through relevant, integrated content.

Conclusion

The main limitation of this study is that it reflects the situation of a single gymnasium community regarding the aspect under investigation. However, the data reveals potential trends that may be present in other schools of this type, warranting further large-scale qualitative or quantitative research.

The study concludes that interdisciplinary integration in gymnasiums is inconsistent, and largely depends on individual teacher initiative. Although the teachers who participated in the discussion acknowledged the value of integration for student learning, it is often implemented in a fragmented way, and the lack of collegial planning impedes a more systematic approach. The biggest challenges to interdisciplinary integration are the lack of time, planning, and a shared vision. Teachers face difficulties in coordinating timetables, and lack a structured framework to facilitate the organisation of joint activities. There is also a lack of transparently accessible information on the topics and integration plans of colleagues' lessons.

Shared leadership practices are considered essential for sustainable integration. The survey reveals teachers' willingness to share responsibilities, to work as a team, and to make decisions in a collegial manner. It is suggested that proactive working groups should be set up to curate interdisciplinary activities.

The principles of the Agile project management model (iterativeness, reflection, teamwork and flexible planning) are in line with the needs of interdisciplinary integration in the gymnasium. Teachers advocate a coherent organisation of processes, clear sequences of activities (sprints), the possibility to reflect on results, and to adjust actions flexibly, which is directly in line with the Agile methodology.

References

Adam, P. A. (2023). Designing flexible learning spaces with Agile principles. *Agile in ISO 9001: How to Integrate Agile Processes in Quality Management Systems*, 1–20. Springer. DOI: https://doi.org/10.1007/978-3-031-23588-7_1

Bergmann, T., Karwowski, W. (2019). Agile Project Management and Project Success: A Literature Review. In J. I. Kantola, S. Nazir, T. Barath (eds.). Advances in Human Factors, Business Management and Society. AHFE 2018. *Advances in Intelligent Systems and Computing*, *783*. Springer, Cham. DOI: https://doi.org/10.1007/978-3-319-94709-9_39

Cockburn, A., Highsmith, J. (2001). *Agile Software Development, the People Factor*. Computer.

Dewi, D. A., Muniandy, M. (2014). The agility of agile methodology for teaching and learning activities. *2014 8th. Malaysian Software Engineering Conference (MySEC)*, 255–259. IEEE.

Drake, S., Burns, R. (2004). *Meeting standards through integrated curriculum*. ASCD.

Duvall, S., Hutchings, D., Kleckner, M. (2017). Changing perceptions of discrete mathematics through Scrum-based course management practices. *Journal of Computing Sciences in Colleges*, *33* (2), 182–189.

Fitsilis, P. (2023). *Q&A for agile education.* DOI: https//10.13140/RG.2.2.18123.77601

Fogarty, R. J., Pete, B. M. (2009). *How to integrate the curricula*. Corwin Press.

Gerulaitis, Š., Jevsejevienė, J., Poderienė, N., Raudienė, I. (2019). *Bendrųjų programų atnaujinimo gairės.* Vilnius: Švietimo ir mokslo ministerijos Švietimo aprūpinimo centras. https://www.mokykla2030.lt/wp-content/uploads/2019/08/Bendrujuprogramu-atnaujinimo-gaires.-Projektas-2019-08-21.pdf

Ghamrawi, N. (2024). Educational leadership in the age of artificial intelligence: Are we ready? *Proceedings of the Annual International Scientific Conference.* https://jaesjo.com/index.php/conf/article/view/732

Guerrero-Vásquez, L. F. ir kt. (2024). Proposal of an Agile Approach Based on Scrum for Managing Continuing Education Programs. In J. P. Salgado-Guerrero, H. R. Vega-Carrillo, G. García-Fernández, V. Robles-Bykbaev (eds). Systems, Smart Technologies and Innovation for Society. *CITIS 2023. Lecture Notes in Networks and Systems, 870*. Springer, Cham. DOI: https://doi.org/10.1007/978-3-031-51982-6_29

Harris, A. (2014). *Distributed leadership matters: Perspectives, practicalities and potential*. Corwin Press.

Jonker, H., März, V., Voogt, J. (2020). Curriculum flexibility in a blended curriculum. *Australasian Journal of Educational Technology*, *36* (1), 68–84. DOI: http://dx.doi.org/10.14742/ajet.4926.

Kamp, A. (2019). *Science and Technology Education for 21st Century Europe: Discussion Paper on the Role of Universities of Science and Technology*. CESAER. https://pure.tudelft.nl/ws/portalfiles/portal/70920062/CESAER_20191218_discussion_paper_st_education.pdf

Kutkaitis, A., Petrulis, A. (2022). Vadovavimo stilių vertinimas Klaipėdos ugdymo įstaigose. *Regional Formation and Development Studies*, *12* (1), 171–182. DOI: http://doi:10.15181/rfds.v12i1.694

López-Alcarria, A., Olivares-Vicente, A., Poza-Vilches, F. (2019). A systematic review of the use of agile methodologies in education to foster sustainability competencies. *Sustainability*, *11* (10), 2915. https://www.mdpi.com/2071-1050/11/10/2915

Lu, B., Declue, T. (2011). Teaching agile methodology in a software engineering capstone course. *Journal of Computing Sciences in Colleges*, *26*, 293–299.

Niemelä, M. (2022). *Knowledge-based curriculum integration: potentials and challenges for teaching and curriculum design*. http://urn.fi/URN:ISBN:978-951-51-8252-4

Morcov, S. (2020). *Modern agile learning environment. INTED2020 Proceedings*. https://library.iated.org/view/MORCOV2020MOD

Noguera, I., Guerrero-Roldán, A. E., Masó, R. (2018). Collaborative agile learning in online environments: Strategies for improving team regulation and project management. *Computers & Education*, *116*, 110–129.

Paez, N. M. (2017). A flipped classroom experience teaching software engineering. *Proceedings of the IEEE/ACM 1st International Workshop on Software Engineering Curricula for Millennials*, 36–40. IEEE. DOI: https://doi.org/10.1109/SECM.2017.796

Paužuolienė, J., Šimanskienė, L. (2021). *Organizacinė kultūra: vertinimas, formavimas, keitimas*. Klaipėda: Klaipėdos universiteto leidykla.

Popa, D. (2023). Agile Management and Leadership in Education. *EIRP Proceedings*, *18* (1), 451–457.

Salza, P., Musmarra, P., Ferrucci, F. (2019). Agile methodologies in education: A review. *Agile and lean concepts for teaching and learning: Bringing methodologies from industry to the classroom*, 25–45.

Shields, C. M. (2010). Transformative Leadership: Working for Equity in Diverse Contexts. Educational Administration Quarterly, *46* (4), 558–589. DOI: https://doi.org/10.1177/0013161X10375609

Simões, A. V. (2024). Developing global competence in Higher Education: interdisciplinary, action-oriented approaches in the EFL classroom. *Identidades e Globalização: Encontros, Fronteiras e Mediações*, 116. DOI: https://doi.org/10.48528/k1cq-m337

Spillane, J. P. (2005). Distributed leadership. *The Educational Forum*, *69* (2), 143–150. DOI: https://doi.org/10.1080/00131720508984678

Stewart, J. C., DeCusatis, C., Kidder, K. G., Massi, J. R., Anne, K. (2009). *Evaluating Agile Principles in Active and Cooperative Learning*. Student-Faculty Research Day, CSIS, Pace University. https://cutt.ly/piuBBUI

Winlow, H., Simm, D., Marvell, A. Schaaf, R. (2012). Using Focus Group Research to Support Teaching and Learning. *Journal of Geography in Higher Education*, *37*, 1–13. 10.1080/03098265.2012.696595.DOI: https://10.1080/03098265.2012.696595.

PROJEKTO VALDYMO MODELIO „AGILE“ TAIKYMO GALIMYBĖS ĮGYVENDINANT TARPDALYKINĘ INTEGRACIJĄ GIMNAZIJOJE

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Santrauka

Straipsnyje analizuojamas projektų valdymo modelio AGILE taikymas organizuojant tarpdisciplininį ugdymą gimnazijoje. Sparčiai kintanti visuomenė verčia švietimo institucijas ne tik peržiūrėti ugdymo turinio struktūrą, bet ir ieškoti naujų valdymo bei bendradarbiavimo formų. Šiame kontekste ypač aktualus tampa gebėjimas integruoti mokymosi turinį tarp skirtingų disciplinų, taip sudarant sąlygas mokiniams ugdytis aktualias XXI a. kompetencijas – kritinį mąstymą, problemų sprendimo gebėjimą, kūrybiškumą, gebėjimą dirbti komandoje. Tyrimo tikslas – ištirti ir pristatyti AGILE modelio taikymo galimybes įgyvendinant tarpdisciplininę integraciją gimnazijoje. AGILE modelis IT sektoriuje pasižymi lankstumu, iteratyvumu, komandiniu veikimu ir grįžtamojo ryšio kultūra – šios savybės gali būti ypač veiksmingos siekiant nuoseklaus, struktūruoto tarpdalykinio ugdymo. Tyrime pasitelktas kokybinis metodas – diskusijų grupės interviu su X miesto gimnazijos mokytojais ir metodinių grupių pirmininkais ($N = 6$), duomenys analizuoti taikant teminę analizę (Nowell ir kt., 2017). Tyrimo rezultatai atskleidė keletą esminių aspektų. Visų pirma tarpdisciplininė integracija gimnazijoje vykdoma netolygiai ir dažnai priklauso nuo pavienių mokytojų entuziazmo bei iniciatyvos. Trūksta bendros vizijos, aiškios struktūros ir organizacinių priemonių, leidžiančių sistemingai planuoti tarpdisciplininės veiklas. Antra, išryškėjo mokytojų noras bendradarbiauti: jie siekia dirbti komandose, dalintis atsakomybe ir kartu planuoti ugdymo veiklas, tačiau tam būtina administracijos parama, laiko ištekliai ir aiškus planavimo modelis. AGILE projektų valdymo modelis įvardijamas kaip galimas sprendimas sprendžiant šiuos iššūkius. Tyrimo dalyviai palankiai vertina AGILE metodikos principus – „sprintus“, nuoseklų tikslų siekimą, refleksiją ir lankstų prisitaikymą. Jie pažymi, kad toks požiūris padėtų ne tik efektyviau organizuoti tarpdisciplininės veiklas, bet ir sustiprintų mokytojų tarpusavio ryšius bei pagerintų bendrą ugdymo kokybę. Taigi tyrimas patvirtino, kad AGILE projekto valdymo modelis gali būti tvari ir veiksminga priemonė integruotą ugdymą siekiančioms diegti gimnazijoms. Siūloma kurti nuolat veikiančias tarpdisciplininės darbo grupes, kurios leistų įtvirtinti refleksijos kultūrą, taikyti lanksčius, aiškiai struktūruotus, AGILE projekto valdymo logiką atitinkančius planavimo metodus.

RAKTINIAI ŽODŽIAI: *tarpdisciplininė integracija, AGILE projekto valdymo modelis, komanda, gimnazija.*

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