



Implementation of Electronic-Based Decision Making in Sports Event Management of Bone Regency Youth and Sports Department

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Abstract

The implementation of Electronic-Based Decision Making (EBDM) in regarding to the management of the sports events particularly at Bone Regency Youth and Sports Department, can be seen as a breakthrough. In this paper, an evaluation of the various aspects under EBDM is undertaken from the perspective of the efficiency, accuracy and the degree of stakeholder engagement in the decision-making process. In this work, which uses interviews, observations, and document analysis, the empirical evidence of how EBDM has reduced decision time and increased the precision of decisions while eliminating traditional 'time-consuming and error-prone' methods is presented. Nevertheless, it has not been without problems some of which are staff resistance to new technologies and data safety issues. Some of the crucial recommendations that have been found in the study include the need for constant training, enhanced data handling, and successful implementation of stakeholder engagement in the case of EBDM. Despite these benefits of EBDM in enhancing the quality of decision made, the study sad that there exists the need to continue assessing various decisions to ensure they retain their quality and meet emerging risks. According to the research, EBDM, when implemented, has the potential to significantly enhance operational effectiveness but only when implemented in a way that adequately takes into consideration the need to address associated technological as well as workforce issues for the program to work in the long run.

Introduction

The integration of technological tools in decision making in the organisation of sports events is a revolution in the way events are organised. In the modern world when the scale and the degree of the differentiation of sports events does grow continuously, the usage of the approaches based on manual and paper based decision making appears to be insufficient. The shortcomings that are characteristic for traditional methods not only threaten the outcomes of events, but also negatively affect the general sports organizations' goals and strategies (Chen & Zhang, 2021). Consequently, electronic based decision making (EBDM) systems have become an important innovation, which seek to provide solutions to challenges of inefficiency, inaccuracy and poor stakeholder relations (Parent et al., 2023; Sellak et al., 2017; Nasseef et al., 2022).

Although, EBDM seems as positive experience within the Criminal Justice System, it has some issues mostly connected with technical development and digital literacy in some parts of

the world (Mbachu et al., 2024). Accordingly, the case of implementation of EBDM in one of the districts in Indonesia, Bone Regency to be specific in the Youth and Sports Department shows both the possibilities and challenges arising from the shift. Nevertheless, the region's sports management envisaged and practised traditional practice of management. While the complexity of the management of sports events has escalated significantly over the last few years, it has prompted the reappraisal of these forms of practice (Read et al., 2023). The current processes being used in the department are very slow, manual and even error-prone, moreover do not take full advantage of the technological opportunities for optimization of decision making processes (Arifin & Yusof, 2022; Kienzle et al., 2022).

It is for these reasons that EBDM is being applied to the management of the Bone Regency's sports event (Awaluddin et al., 2024). But the use of such an approach can only be successful if one fully comprehends the underlying technological and the social dynamics of the issue. According to prior scholastic works, it is actually noticeable that the efficiency of EBDM depends heavily on the willingness of the concerned organization to adopt the technological advancement in its operation and decision making and it can lead to enhanced operational efficiency and better decision making ability of the organization (Singcram & Thanaiudompat, 2023). It includes not only have sufficient technological support but also the readiness of people in school to use these technologies properly (Awaluddin, 2018). Furthermore, to integrate EBDM there must be comprehensive measures towards data protection enough to maintain integrity of the decision making process (Mfutso-Bengo et al., 2023).

This shift within the Bone Regency Youth and Sports Department in particular is not exclusive to their agency EBDM is considered to be a growing trend within the sports industry as the social functions of facilities are now considered to require digitization for competitiveness in the global market. Modern sports industry is not only about staging events but it is also about value creation related to participants' experience, event operations and management and decision making (Perić et al., 2019). In this regard, the integration of EBDM can be viewed as a contributing factor to engage in the process of "sport management professionalisation", which is an effort to promote and enhance management practices of sporting activities in Bone Regency that follows international standards (Supardi & Nurdin, 2020).

However, the process of EBDM as we have seen is not totally without some setbacks. In such areas as Bone Regency, where there may be a lack of basic internet implementation, or where the staff may not support change because of their entrenched background in conventional systems, the paradigm shift to EBDM has concrete implications for management (Jaelani, 2021). The effectiveness of this initiative will go hand in hand with the technical factors such as the EBDM system and the level of organizational culture change and the receptiveness of staff to change. Therefore, this study focuses on the factors that contribute to the successful implementation of EBDM in the BRYSD in order to discover the advantages and disadvantage of moving to EBDM process.

Methods

This study therefore uses descriptive qualitative research approach to find out the extent of implementation of EBDM in the management of sports events of Bone Regency Youth and Sports Department. The chosen qualitative approach is suitable for this study to its capacity to describe the processes as well as the experiences and perceptions of EBDM implementation. The main purpose of the study is to review the literature and understand the impact of EBDM on the efficiency, accuracy and stakeholders' experience of decision making, as well as, to determine the strength and weakness in implementation.

Research Design

About the research design, it is necessary to note that the study is based on a descriptive qualitative approach that aims at describing and understanding the current situation and practices in the BRYSYD. This design is suitable for the study as it will enable capturing of the details of EBDM implementation in a particular, real-life setting (Hennink et al., 2020). By treating the decisions themselves as more meaningful than those thought to make them, the study aims at providing work application knowledge while at the same time having general utility.

Data Collection Techniques

Interviews, observations as well as document analysis are the main data collection techniques used in the study. The participants were the head of the Youth and Sports Department, the department secretary, the head of the sports division, and section heads under the division. Technique used in purposively sampling involve choosing informants within and who have had first-hand experience and participation in the application of EBDM in sports event management (Liamputtong, 2020). The questions in the interview were structured in a way to obtain rich description of the experiences, perception of the entire EBDM and our informants' beliefs about the subject: the role of technology in managing and supporting sports events.

Sesquipedalian observation was conducted at several time phases of the planning and delivery of a sports event. This method enabled the researchers to observe the use of EBDM systems in natural context and consequently evaluate the impact of these systems on decision making and post-implementation event (Hennink et al., 2020). Field notes in turn, concentrated to certain areas of interests like data acquisition, synchronous/functional interaction between EBDM stakeholders, and enforcing of decisions as per the EBDM system design and implementation. Extremely important was the identification of internal and external sources of information, archives, records of the previous events concerning sports, and other related documents to triangulate the results of interviews and observations. This analysis was also useful in complementing with other information that I had gathered from other sources as a way of cross check. Document analysis also helped to understanding the historical decision making process in the department and how has this process changed after the introduction of EBDM.

Data Analysis

The three data sets were analysed using the domain analysis technique, which is employed for identifying and mapping of patterns, themes and relationships in qualitative data. The first one was related to minimising the data collected through interviews, observations, and documents by identifying the data of minor importance in the collected data. It was also useful in helping to sharpen the analysis to the primary features of EBDM implementation (Liamputtong, 2020). The obtained data were minimised and arranged in a more concise and orderly manner, with the use of matrices and charts in an attempt to make visible patterns and trends. This step served the purpose of helping the researchers to map the various dimensions of EBDM implementation and their effects on sports event management as depicted in figure one (Hammarberg et al., 2016). The last process was of integration of data to get useful conclusions regarding the implementation of EBDM in sports event management. This involved the comparing and reconciling of the findings from one data source with those of the other in order to enhance their reliability and credibility, and for the methodological underpinning of this study (Sugiyono, 2015).

Result and Discussion

Decision Making Effectiveness

There are few reported delays in using EBDM; for instance, the Head of Sports Division elicited:

“With EBDM, we are in a position to collect a lot of information for analysis much faster... Looking at it from past practice, it used to take us several days to pull the necessary information from different departments, but with EBDM, the whole process only takes a few hours.”

This quote captures a real transformation in the rate at which EBDM is processing data compared to earlier methods. The change of the otherwise time taking process to just a few hours highlights the advantages of the change that is otherwise quite important if the environment is always dynamic just as it is in sports event management. Such efficiency not only enables decision-making to be made quicker, but also increases the department’s capacity to address new concerns as they are arising. But, this also gives rise to certain doubts as to whether this speed is sustainable for the staff, whether the staff can continue to work with such intensity without getting weary, whether the efficiency is coming at the expense of the quality of decisions made.

There is improved regulatory decision-making efficiency. The interventions are not waited on lengthy meetings; decision making is now informed by real time data. (Department Secretary)

The fact that power to make some decisions is shifted towards EBDM means that bureaucratic delays which are typical for many government departments are minimised here. Through this approach, EBDM has probably helped reduce the number of times people need to meet hence increasing the efficiency. This has proven to mean that decisions are now being made out of timely analysis of data, rather than out of lot of discussion that may be steered by the analyst’s bias or the power invested in a superior’s position. Nevertheless, it is important to contemplate what decision making framework may be depriving society of such opinions, thus, excluding them from the decision making process inclusive of discussions and debates.

Table 1. Time Required for Decision Making Before and After EBDM

Decision-Making Stage	Traditional Method	EBDM Implementation
Data Collection	2-3 days	4-6 hours
Data Analysis	1-2 days	2-4 hours
Final Decision	1-2 days	1 day
Total Time	4-7 days	1-2 days

Therefore, the table demonstrates the difference between EBDM and non EBDM, in terms of time-saving. A cut of up to seven days in the time taken to reach a decision was cut down to one or two days, and that is where the operations advantage lies. These possible time saving could mean that the department gets to put more time into planning and implementation than into decision making. However, the fast tempo is also some drawback stemming from EBDM where it might be rather hard to analyze several factors and details that are inherent in the statistical data, and increase the level of stress among the staff due to the increased rate of work.

Decision Accuracy

The use of EBDM has led to the decrease in wrong decisions. Data can be verified at the blink of an eye hence leading to the eradication of decisions that may pose a threat to the event. (Interviewee- Head of Department).

The quotation above points to real-time data query and subsequent cross checking as one of the big advantages of EBDM hence a reduction in errors. Prompt validation of data guarantees that there is an implementation of proper information on matters that are ever changing such as in the instance of the sports events management. It also ideas that the department may now relay fewer interruptions and complication in event implementation and execution. But, again, the time saving benefit of attaining data accuracy through the use of the technology simultaneously opens new avenues of risks; for instance, over dependence with the system adopted and the risk of technical glitches that may dilute the decision-making process.

“Rather than making a lot of assumptions before attending an EBDM event, a lot of guess work is involved now decisions are based on actual hard facts which has to make the decisions a lot better.” (Sports Event Coordinator)

Moving from speculation to accurate statistics is a complete transformation of the way in which the department functions. This way, the department probably is more consistent and gets more of the expected results which are free from manifestations of randomness characteristic of subjective decision making. Finally, the focus on data carries some risks as well, the need to provide high quality initial data, as well as potential omission important experiential knowledge hard to translate into the data framework. But it is also important to evaluate if the given department is capable to consider such data without misinterpretation.

Table 2. Comparison of Decision Accuracy Before and After EBDM

Decision Area	Error Rate (Traditional)	Error Rate (EBDM)
Scheduling Conflicts	15%	5%
Resource Misallocation	20%	8%
Budget Mismanagement	18%	7%

The table shows a significant reduction of errors in all the decision areas under the EBDM. For example, from 15 % to 5 % fewer scheduling conflictations mean that the schedules are better planned and more accurate. In the same way, the enhancement of resources and budget the efficiency of resources as well as the monitoring of the financial aspects of the system prove effective. However, such improvements need to be objectively as far as their sustainability is concerned. Further, there is a need to ascertain that these error rates ought to maintain the rate of decline or remain low at all times and the staff is trained intermittently with a view of addressing new challenges which may emerge as and when the EBDM system is being upgraded.

Participant Engagement

“People feel more engaged now. They can also get information and updates from the system therefore they more câmereted.” (Event Organizer)

This quote supports participant engagement when there is the implementation of EBDM. By loading information into the system, the main proevent can benefit from having an inclusive climate of participants in order that they feel proprietorship and obligation concerning the

occasions. Importantly it is helpful in establishing trust and made assured that the participants are okay with the decisions being made.

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Table 3. Participant Engagement Levels Before and After EBDM

Engagement Aspect	Traditional Method	EBDM Implementation
Access to Real-Time Information	Limited	Comprehensive
Transparency of Decisions	Low	High
Participant Feedback Integration	Ad-hoc	Systematic

Table shows increased participant engagement by displaying improvements anchored on EBDM integration across the participants’ activities. The availability of information in realtime has shifted from limited to comprehensive that is likely yo improve the satisfaction and involvement of participants. The shift from LTI to HTI indicates improvement in SCMD in that the participants have gained better appreciation concerning decisions made. Moreover, changes in the systematic feedback integration over the ad-hoc proves that participant ‘voice’ is being incorporated and valued more systematically than before; therefore, more participant centered strategy is used in managing events. However, the question of how to avoid participant or system overload as a result of this increased engagement has not yet been adequately addressed a matter compounded by the question of whether or not feedback is actually listened to, or simply gathered for the sake of ticking a box marked ‘consulting participants.

Challenges in Implementation

'One of the most difficult aspects of the process has been to sell the new system to everyone. Not everyone is a lover of technology.'

The idea of this quote is to illustrate the problem of resistance to change in many organizations, and the same problem was encountered during the implementation of EBDM. A few staff members feel uncomfortable with technology, which means that staff should be trained in handling those technologies to change their attitude towards it. This resistance could slow the implementation process and might result in the underutilization of the system in case it is not handled. It also produced concerns about the applicability of the system whether or not the application of the system could be flexible enough to accommodate the ineptitude or lack of technological advancement seen in some of the staff.

"This has made data security to be an issue of concern as we have had to embark on training our staff on how to handle sensitive information."

The factor of data security is an important factor in the use of EBDM. The need for more training is a testament that handling of such information in today's world requires more than just the basic knowledge. Although materialization of EBDM has several advantages, it also poses new threats especially in the protection and management of personal information. The investment in training is therefore a good direction, but it also points to the fact that these are ongoing challenges that is, not inapplicable only that a staff was trained once, but that the staff continues to keep himself up to date with changes in technology and threats. This concern also underlines the aspiration of the department to develop sound data governance policies to protect the value and security of the information being processed.

Table 4. Challenges in EBDM Implementation

Challenge	Description	Mitigation Efforts
Resistance to Change	Some staff prefer traditional methods and resist new systems	Continuous training and involvement in the process
Technological Skills	Varied levels of comfort with technology among staff	Tailored training programs
Data Security Concerns	Risks associated with handling sensitive information	Enhanced security protocols and staff training

Altogether, the table below provides a summary of the main difficulties experienced during the EBDM implementation. Organizational resistance is a major issue, especially in a location where technology can be regarded as a sensitive issue. As for the proposed mitigation effort labeled as continuous training and involvement, one can understand that the department emphasizes the necessity of steady, gradual change management with the involvement of all interested parties. But it is important to analyse the following questions critically: do these training programmes really answer the needs of the staff, and are there any ways for the organisation to evaluate the efficiency of the training programmes that seem rather weak in further details.

This problem is compounded by the fact that the technological skills of the staff members are not uniform, thus making the implementation process that much more difficult. The training intervention described in this article are important: specifically, the idea of training contained in the tailored programs needs to be scalable up or down, as technology advances or slows, and as the rate at which the various members of the staff apprehend and assimilate new information changes. In the last point-database security issues raise the knowledge that the protection of

data should not be the sole responsibility of the IT department but also a responsibility shared by all the employees.

Advancements in Decision Making Efficiency and Accuracy

Evidence presented establishes the proposition that EBDM has greatly transformed speed of decision making from the previous several days to only a number of hours. This improvement also supports the current trends of digital transformation in the world where the implementation of technology in administrative business has been realized to de-synchronize work processes and eliminate bottlenecks (Chen & Zhang, 2021; Parent et al., 2023). The ability to rapidly acquire and process data and its usage is one of the strengths of EBDM, especially the management of sports events, where time is an important factor.

However, fast work highlights the problem of the method being paradoxical. As is clear, and worked out above, a faster rate of decision making is undeniably a positive thing in so far as it reduces the occurrence of delay and increases the capacity to be reactive though at the same time, such a development may also be problematic due to obvious potential for decisions being made hastily (Supardi & Nurdin, 2020; Wogrin et al., 2020). Scholars state that there is a danger of hasty decision-making when a particular focus is placed on efficiency, which may cause considerations of details or a range of opinions to be neglected (Hennink et al., 2020). In the context of Bone Regency, the requirement is to help to avoid the situation when the insistence on the fast adoption of decisions is detrimental to their quality, since such decisions are usually made during sports events where stakeholders usually have different interests. It is for this reason that the department needs to introduce measures that would put all decisions under certain check as it enters into the fold of EBDM while benefiting from the efficiencies that come with it (Gupta et al., 2022).

The drastic increase in the chances of making correct decisions at the organizational level while at the same time decreasing the risks of scheduling errors, resource misallocation, and the issue of budgetary constraints makes it clear why EBDM can be said to hold the key to increasing the competence of decisions made in organizations (Majdzadeh et al., 2012). This shift helps to avoid many mistakes that were parameters of the department's functioning on the basis of subjective judgment. This shift is especially appropriate in the Indonesian setting, where government organisations have been accused of ineffectiveness and a lack of accountability (Jaelani, 2021; Prabowo & Cooper, 2016). Evidence presented establishes the proposition that EBDM has greatly transformed speed of decision making from the previous several days to only a number of hours. This improvement also supports the current trends of digital transformation in the world where the implementation of technology in administrative business has been realized to de-synchronize work processes and eliminate bottlenecks (Chen & Zhang, 2021; Parent et al., 2023). The ability to rapidly acquire and process data and its usage is one of the strengths of EBDM, especially the management of sports events, where time is an important factor.

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However, the most significant improvement is the incorporation of participants' feedback in the decision making process: the effectiveness of this incorporation depends on the manner participating stakeholders' feedback is used. The shift from an ad hoc to a systematic approach to feedback mechanisms implies that there is successful formalisation of the participant involvement that could improve the departmental decisions' sensitivity. Nevertheless, if the feedback is obtained but not implemented, or when the participants believe that their feedback is just a mere ritual, trust will diminish (Liamputtong, 2020; Kingston et al., 2023). Therefore, the department has to engage participants in the process of giving feedback and ensure that there is a clear correlation between the involvement of the participants and the outcomes that are arrived at to support the credibility of the EBDM system.

Managing Resisters to Change and Information Technology Security Issues

While numerous strengths of EBDM has been discussed in the literature, this research finds that adoption of EBDM is not without its weaknesses especially in relation to organizational resistance to change and the issue of data security. Organizational inertia which tends to also manifest in the resistance to technology change is endemic in organizations because the change often springs from the workers' unfamiliarity with the new technology or lethargy that stems from the ingrained old ways of working (Jaelani 2021). In the case of Bone Regency, where the level of adoption of technology by the staff may differ significantly this has become a limitation. This emerges from the qualitative data and it may be a challenge that all staff need to be taken through training when it comes to accepting these technological systems and also being trained on how to use these technologies effectively (Antonietti et al., 2022; Beer & Mulder, 2020).

The change that is being driven by the Train the Trainers' training program, therefore, needs to adopt a change management strategy that involves practice at all of these levels of resistance (Vlachopoulos, 2021). Analysis of literature proves that staff engagement in the implementation process such as training, pilot projects and continuous support helps in eliminating fears as well as enhancing confidence in the new system (Hennink et al., 2020). The department also needs to consider the psychological view of change with the idea in mind that resistance goes beyond lack of technical knowledge on change but could also be borne out of fear of the impacts of digitalization on employment and working environment. This way the

programs of both technical training and counselling to the employees enable the department to manage the various issues arising out of change.

Issues to do with data protection also rise to the fore as another significant problem in the study, given prevailing apprehensions on issues of the digital systems. As the usage of EBDM rises in the department, the vulnerability to the attacks such as data leakage or cyber threats escalates (Singh et al., 2023). This is more so bearing in mind that the department deals with extremely sensitive information, especially that identifying the participants as well as financial records (Liamputtong, 2020). The challenge of security is therefore a critical factor that has to be addressed as relates to the EBDM system to ensure the security of data while at the same time, ensuring that participants and stakeholders retain confidence in the system (Okoye et al., 2020). Of greatest concern therefore, is the fact that the department has no adequate data security measures such as encryption, user access controls, and regular security audits. Actually, training once in a while with relation to the protection of data is a good practice as everyone must conform to the rules which protect such information (Andersons & Ritter, 2015). The department also has to pay constant attention to new threats arising in the cyber space and the changes that need to be made to the current security standards since the protection of data is a dynamic process.

Strategic Implications and Future Directions

The conclusions of this study are thus have discussed significant strategic implications for the BRYSYD and any other organizations that may seek to ascribe to EBDM. This research stresses the need to work to enhance digital transformation, where practices of technology management are complemented by changes in organizational culture, and human capital development (Parent et al., 2023). EBDM is not just about the technology; it is about the organisation's willingness to develop new ways of working and consistently enhance its operations.

Continued assessment of the procedures and effectiveness of EBDM will also require constant investment on the part of the department to guarantee development of the ideal system in the face of growing requirements and difficulties. This could entail the creation of a specific monitoring and evaluation subsidiary of the specific department that deals with EBDM to investigate its efficiency, hear from the various stakeholders, and evaluate for improvements (Singram & Thanaiudompat, 2023). Thus, through the above process, the department will be able to guarantee that EBDM continues to be an evolving concept that is useful to the department's strategic planning in the future. Moreover, the department has to achieve the balance of rationalization and high quality at the same time. On the advantage side of using EBDM, there is time efficiency and increased accuracy and precision of the decisions made. The possible disadvantage of adopting the technique is that there is potential threat that the use of the system may lead to hasty decisions (Sorate & Bhale, 2015). To help avoid this risk, the department should put in place decision making criteria or simply decision review points to make certain that each decision is reviewed to an acceptable level. It is important in order to strike a balance between EBDM and decision quality to support the idea that the benefits derived from EBDM are not achieved at the cost of decision quality (Imron et al., 2023).

Conclusion

The introduction of Electronic Based Decision Making (EBDM) in the administration of the Bone Regency Youth and Sports Department can therefore be said to be very significant. Hence, this research has shown that EBDM can improve decision-making by a considerable margin, also in its efficiency, correctness, and communication with stakeholders. Since the

methods used before where almost manual /paper based the conversion to a predominantly digitized working structure has not only increase efficiency but has also put this department in tandem with working structures all over the world in as far as governance and the management of sports is concerned. The decrease in decision making time together with increase in accuracy exhibits that EBDM is capable of minimizing on errors and maximize on resource utilization. These advantages are even more notable when it comes to the management of sports events in which accurate and prompt decisions are vital. These observations are not out of place given the understanding of this study in relation to other strands of literature on digital governance which stresses the efficiencies that accompany technology in relation to the public sector (Chen & Zhang, 2021; Parent et al., 2023).

Nevertheless, the shift of practice towards EBDM has emerged several issues that point to the dynamics of change in public organizations. The full actualization of Potential of EBDM is constrained by Organizational culture and particularly with regards to staff resistance to change the major barrier is rooted in technological fear and work practices. Moreover, the heightened emphasis on speed and data-driven decisions introduces a paradox: while it helps to speed up processes, it also compromises the traditional nature of EBDM, which is all about deliberation of decisions, a factor that is widely discussed in the literature on organisational change (Hennink et al., 2020). Data security next comes to the forefront, with digital enhancements of decision making making organisations more prone to cyber risks. Based on the fact that public administration involves handling of a lot of data that is sensitive in nature, compliance with data security measures is not only a business requirement but could also considered a fundamental aspect of minimising risk and ensuring that public confidence in the system is not compromised (Liamputtong, 2020).

In a managerial sense, this research underlines the whispers for action oriented, customer focused, integrated, and flexible approach towards digital transformation which is in synchrony with the evolving organisational culture and human capital. EBDM success does not only depend on the technical stability of the system but the department's ability to promote effective learning and improvement. This includes training, data quality, and feedback and iterations incorporated as organizational procedures. Moreover, the department has to consider the positive effects of EBDM on rational decision making while recognising the importance of equality and involvement of all the interested parties. By sharpening focus on the rational and the extensive access to documents provided by EBDM, there is an opportunity to construct the future trust where it has been eroded in the past, especially given that the Indonesian government has been perceived as a black box riddled with inefficiencies (Jaelani, 2021). With stakeholders engaged in the system and appreciating the impact of their contribution to the final decisions, EBDM can be used not only to improve the working of the department but also as a tool to drum up the tenets of democracy.

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Conflict of Interest

This article does not contain any studies with human or animal subjects performed by any of the authors.

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