E-PARTICIPATION GUIDELINES FOR DECISION-MAKERS
SOCIAL LISTENING THROUGH THE DIGITAL DASHBOARD

ecas
European Citizen Action Service

CITIZENS
FOUNDATION

cka
civil esleigium cogsitvisry

esn
INTERNATIONAL EXCHANGE
ERASMUS STUDENT NETWORK

GONG

ProInfo

The
Consultation
Institute

Executive Summary

This report explains the *Digital Ecosystem for E-Participation Linking Youth* (DEEP-linking Youth), approach to e-participation and how it can be used as an instrument to stimulate young people's active participation in democratic life, with the Digital Dashboard as our outlet for empowerment.

It contains the outcomes from its two main activities:

In the first activity, we examined **how to reach out to young people by exploiting digital tools**, based on the assumption that it is important to understand why young people are online, what types of digital tools they use and to what type of content they react the most.

Throughout the DEEP-linking Youth project, we created online content and implemented Boot Camps and a Digital Competition, in which young people had to create their own digital content around the topic of youth mobility. The project was also about stimulating interaction between policy-makers and young people, for example through a Live Chat on Facebook, where young people could voice their concerns on learning mobility programmes.

We distributed the digital content created in these sub-activities and monitored them online in order to provide recommendations on how to optimise digital marketing techniques and strategies to engage with young people in the future.

In the second activity, we consider that the innovation of the project is to **understand how to include the voices of the young people who _do not_ engage in decision-making processes**. Our answer to this was the creation of a **Digital Dashboard**, a platform that is meant to extract insights for policy-makers and which was tested on the topics 'learning mobility programmes' and 'youth mobility' in the EU.

We explain the five steps of the process: the initial research on the topics, collecting and scraping the data, the 'social listening' mechanism (including ethical guidelines), the categorisation process and concluding with the creation of an automated system, the Digital Dashboard. We also included a concrete example of how we managed to extract interesting sentiments around youth mobility and we added our thoughts on how these could be used as insights for policy-makers for improving learning mobility programmes.

Through the two main activities, the DEEP-linking youth project has:

- Highlighted the need to better understand the digital psychology behind young people's willingness to participate in public dialogue and to seek to influence policy-makers.

- Demonstrated the value of a Digital Dashboard as a tool for gathering and extracting relevant data and subjecting it to analysis and interpretation; the Digital Dashboard also remains a resource for policy-makers who wish to extract data about learning mobility programmes and youth mobility in the EU.

The last chapter reveals the recommendations on the digital strategies for engaging youth, the 'social listening' process for understanding the disengaged and the Digital Dashboard for providing insights to decision-makers on EU policies.

After the implementation the DEEP-linking Youth project, our main general recommendations are:

- That stakeholders, politicians and organisations experiment with the Digital Dashboard as a tool that can complement continual engagement or as an aid to a policy-making process; mainly it can be used to reach out to, and understand, the points of view of those who actually *do not* participate in the decision-making process.

- That the Digital Dashboard is tested with a more specific or even 'controversial' topic for future research.

- That policy-makers should commission online content generated by youth audiences in the pursuit of engaging with them.

- That digital education is necessary so that more young people are educated about data mining and the repercussions of their online behaviour.

Contents

1. Our Approach on E-Participation

1.1 The Context

Currently, more than half of European citizens believe that their voice does not count in the EU (52%, according to the May 2017 Eurobarometer survey[1]). Support for the European project demonstrated by a majority of young respondents to surveys during the European Year of Citizens, despite the worrying figures on youth social exclusion and unemployment brought about by the crisis, reveals the existence of strong expectations for the EU and significant potential for young people's political participation and engagement. Young people, however, are not keen on using any of the traditional forms of participation as currently practised, as there is an increasing preference for expressing opinions on public issues to decision-makers directly, especially via the internet or social media.

However, despite the vast experience of youth in digital public spaces and through the ever-growing number of tweets, Facebook posts etc., the key challenge remains how to navigate the big data space to ensure connection to and, more importantly, impact on policy-making. We believe it's important to think in terms of systems, the relevant elements of digital ecosystems for e-participation, and the critical role that young people play in these systems.

1.2 "We go to them" instead of "they come us"

E-participation can be a way to foster young people's empowerment and active participation in democratic life. Several e-participation projects until now have focused on building tools and platforms to support and mediate dialogues between citizens and decision-makers but, while this is one way to enhance engagement, these projects have usually fallen short of attracting mass participation and have mainly led to more involvement of the 'usual suspects' in EU policy-making.

In order to use e-participation as an instrument to foster empowerment and active participation, we must be mindful of the reluctance of the vast majority of young people to fully embrace the European brand, to generally engage in politics, to understand or use European jargon and to exercise their democratic rights. We must also compete with the torrent of noise and commercial interests that dominate the online landscape and resist the temptation to create more technology and technological solutions.

In this project, we decided to test, develop and assess a model that builds on what already exists online. The approach of DEEP-linking Youth is based on the assumption that, in order to improve and scale up youth engagement in e-participation, the system should be designed in a way to lead decision-makers to where young people are active online instead of waiting for young people to go to them. This means allowing decision-makers to connect to the everyday 'digital environment' to share, exchange and collaborate with young citizens and not the other way around.

---

[1] First Results, Spring 2017
http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/STANDARD/surveyKy/2142

Following this logic, the DEEP-linking Youth project was implemented through two parallel activities in order to answer the following research questions:

Q1: How can we foster young people's involvement in policy-making through digital strategies?
Q2: How can we understand the 'disengaged' and take their voices into consideration in decision-making processes?

1 For our first activity, our assumption was that, in order to reach out to young people by exploiting technological tools, it is important to understand why young people are online, what types of digital tools they use and to what type of content they react the most.

There are existing spaces where young people congregate online (both networked and peer-to-peer) and the key to triggering involvement is about creating an emotional stimulus. Policy-makers can motivate young people to play an active part in their societies by creating and spreading compelling content through existing digital channels and creating a buzz around current issues. Our assumption is that there needs to be a re-packaging of EU language and more focus on how to encourage youth involvement using online 'nudges' and behavioural insights, as well as digital content strategies.

Part of the DEEP-linking Youth project was to reach out to young people directly to ask for their contribution on these issues. We implemented several sub-activities to motivate and empower young people to play an active part in their societies, by creating and spreading compelling content (videos, infographics, pictures, etc.) through existing digital channels and creating a buzz around current issues.

These sub-activities, which promoted active e-participation on behalf of both young people and policy-makers, included:

- Boot Camps in Hungary and Croatia to gather young people's opinions and train them to create their own captivating online content for policy-makers;
- A Digital Competition to allow young citizens all over Europe (and beyond) to submit their own online content and engage with other online users;
- Live Chats between decision-makers and young people to allow interactions and conversations on EU policy-making.

We distributed the digital content created in these sub-activities and monitored them online in order to provide recommendations on how to optimise digital marketing techniques and strategies to engage with young people in the future.

2 For our second activity, we consider that the innovation of the project is to understand how to include the voices of the young people who _do not_ engage in decision-making processes.

DEEP-linking Youth's answer to this is the creation of an online monitoring platform that can capture young people's insights for policy-making purposes, the so-called '**Digital Dashboard**'. The purpose of this platform is not only to monitor the digital content created in the activities mentioned above but also the content that has not been actively submitted for policy purposes but is, nevertheless, equally important.

In the following chapters, we will explain the two parallel activities of the project and the lessons learned from both experiments.

2. Activity 1 - Fostering young people's involvement in policy-making through digital strategies[2]

2.1 The method in three steps

STEP 1 - Content creation: The digital content that we distributed was created specifically for the project and was sourced from the Boot Camps in Hungary and Croatia as well as from our project partner, ProInfo, who enlisted the help of media students in Bulgaria to create a range of styles[3]. Furthermore, the digital content that was created for the Digital Competition was distributed by the entrants. The theme of all the content (videos, infographics or animations) was youth mobility from the perspective of young people.

During the Boot Camps, young people were taught about the concept of youth mobility and received training on how to produce effective digital content. The young people were then organised into groups and asked to create a storyboard, which was later turned into a clip and edited on the day with the help of an expert mentor.

STEP 2 - Content distribution: We regularly published a selected number of digital content (nine videos in total) over Twitter and Instagram between January and June 2017. Some of the videos were re-edited to remove copyrighted material (such as commercial music) or adjusted to meet the social networking limitations of the project prior to publication. Sometimes, we had to concatenate or edit the content – for example, there is a 60 second time limit on Instagram.

For each post, we also wrote a short narrative and included a unique hashtag for tracking purposes. We searched the trending hashtags of the day and included them in the description. We also copied in a different influencer from those identified in the initial mapping in order to attain maximum traction.

STEP 3 - Content monitoring: We used trackable hashtags to monitor take-up and distribution patterns, as well as, influencer mentions to try and enhance their reach. We estimate that we had around 10,000 views of our content in total (including direct and indirect views) with influencers contributing significantly to this.

Our Instagram profile attracted 88 followers during the testing period and a total of 340 content views. We estimate this to equate to just over an hour of views (based on 20% completion of the shorter, 60 second clips). By comparison, our Twitter profile created 350 content views, resulting in 110 minutes (almost 2 hours) of content viewed.

---

[2] Activity 1 is a summary of the Social Intelligence Report created for the DEEP-linking youth project. In this report, we will only briefly outline the process and focus on the conclusions and recommendations.

[3] https://www.youtube.com/channel/UCyqZNQqDHrN1GHHOzFBemoQ/featured

2.2 Lessons Learned

We had relatively little traction in terms of active engagement with these, but to date over three hours of content has been consumed and we have received nearly 400 likes and 10,000 views. The effect of sharing our content (such as retweets by influencers) had a significant effect on the visibility and consumption of that content.

The overall effectiveness of Twitter in terms of the amount of content consumed was beyond Instagram, but it was significantly easier to attain followers via Instagram than Twitter. Perhaps more significantly, the demographic of those participants on Instagram was more attuned to young people who were 'pre-Erasmus' in terms of their age.

We observed that the majority of activity (likes or views) occurred shortly after publishing our content. On Twitter, the window of interest was very short (within 18-90 minutes), and for the other networks only significant within the first day, with interest completely tailing off within 100 days.

The table below summarises the most popular content types by engagement and consumption rate:

Rank	Title/Style	Source	Observations
1 (Most popular)	**Storytelling (fiction) and mild humour**	Content created by the DEEP-linking Youth partners	Highest number of minutes viewed but a very low completion rate
2	**Benefits of Erasmus+**	Boot Camp	Highly 'liked'
3	**Storytelling (fiction) and mild humour**	Content created by the DEEP-linking Youth partners	Low completion rate[4]
4	**Comedy sketch / light association**	Boot Camp	Comparatively long video, high completion rate

In terms of our content types, the documentary style was least popular by a considerable margin. The clip favoured by the project team was actually marginal in terms of its performance and suffered from a low completion rate. We have a number of hypotheses about this – that it was possibly too long or better suited to a television audience. The most popular clip was produced by amateurs and had an artistic yet informative style.

We concluded that active engagement with content is likely when there is a problem and individuals are seeking solutions or if there is a very specific interest shared by others.

---

[4] Completion rate: refers to watching a video from beginning till end

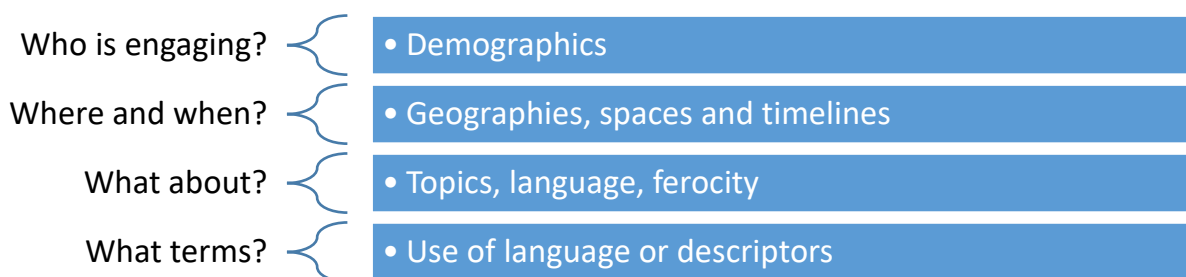# 3. Activity 2 - Listening to the voices of the disengaged

One of DEEP-linking Youth's main activities was the creation of an online monitoring platform that can capture young people's insights for policy-making purposes, the so-called '**Digital Dashboard**'[5]. The objective is to understand how to take into consideration and include the voices of those young people who _do not_ engage for different reasons in decision-making processes.

In this chapter, we will explain how this platform was developed, what its function is and how we tested it specifically on the topic of 'youth mobility' in the EU.

3.1 The Method: Creation of the Automated System – The Digital Dashboard

The Digital Dashboard is an innovative tool that provides a real-time summary of monitored, relevant conversations 'at a glance'. The purpose of the DEEP-linking youth Digital Dashboard is to present youth mobility related content to decision-makers in a digestible format. It contains a mix of quantitative data, such as trends (e.g. sentiment over time) and other statistical information, as well as qualitative data such as specific quotes. The Dashboard is presented as a web page, which can be retrieved by any web browser. It automatically updates over time and can be further filtered using keyword searches.

The Dashboard is based on the concept of 'social listening'. Social listening is a way of answering a series of research questions relating to _the right people and right methods_ according to your objective, as illustrated below. Moreover, it is a way of recognising influencers and developing a 'nudge' strategy for proactively managing online conversations.

Who is engaging?	• Demographics
Where and when?	• Geographies, spaces and timelines
What about?	• Topics, language, ferocity
What terms?	• Use of language or descriptors

The creation of the Digital Dashboard was implemented through the following **five steps**.

| 1. Identification of the subject and subject influencers | 2. Scraping the data | 3. Discovery and Ethical Guidelines for Social Listening | 4. Categorisation Process | 5. The Digital Dashboard |

STEP 1: Identification of the subject and subject influencers

The first step was to choose the topic for the Digital Dashboard to monitor. Since the DEEP-linking Youth project focuses on youth mobility in the EU, we decided to create a Digital Dashboard to identify the challenges young people face in learning mobility programmes.

According to the most recent Erasmus Impact Study Regional Analysis[6], some of the most prevalent barriers to youth mobility are cost and family ties. We decided that there would be a number of key themes related to learning mobility which could be categorised for the purposes of our Digital Dashboard:

FINANCE: cost and affordability
HOUSING: accommodation issues
UNIVERSITY: administration and bureaucracy, classes, credits, etc.
OTHER: general problems not classified by the above, such as social issues (family, language barriers, etc.) and cultural issues (religion, lifestyle and legal issues)

In this phase, we also identified existing platforms and opportunities for engaging with the target audience, including a map of the relevant digital accounts for influencing EU policy-makers to use when publishing our own content. There is a wide range of free online tools[7] to achieve this purpose, mainly allowing us to see which social media profiles have the most influence, or 'kudos', based on a range of statistics, such as the number of followers, account age and activity levels.

---

[6] http://ec.europa.eu/education/library/study/2016/erasmus-impact_en.pdf
[7] For the scope of this project, we used a free tool called "Followerwonk" (https://moz.com/followerwonk/)

STEP 2: Scraping the data

The second step was to collect raw data from the various social networks.

The best way of doing this was to use a third party who had existing arrangements with each network and the technical infrastructure necessary to manipulate the data (such as the storage and retrieval).

A number of companies offer tools for capturing social media data on mass, such as 'Brandwatch' and 'Crimson Hexagon'. These are predominately used by corporations who want to use the data for market research, to identify trends (such as selling signals) or to track their own brands against their competitors. These tools tend to include analytical capabilities, but we needed one that also had an API (so that we could interface directly with it). After arranging a number of demonstrations, we settled with a Dutch Social Media Management Software called 'Coosto'[8].

We instructed Coosto that we were interested in data related to the topics identified in STEP 1 (relating to youth mobility) as the broadest parameters for our search. This was necessary to ensure we stayed within our contracted limit of 250,000 messages per month. To put this in perspective, 510 comments are posted every minute on Facebook alone, hence it is highly expensive to scrape social media traffic about every subject.

STEP 3: Discovery and Ethical Guidelines for Social listening

The third step was to examine the status of the digital landscape relating to youth mobility across the data set by creating some trial searches in Coosto. This helped us to refine our search terms and further filter the Coosto data based on false positives. For example, we discovered that searches for 'Erasmus', relating to the European programme, should exclude those from the well-known Dutch humanist (Desiderius Erasmus of Rotterdam), the corresponding university of the same name and a famous footballer.

We then ring-fenced the collection of data to those originating from the countries where Erasmus+ exchanges can take place[9] and excluded any duplicates. Moreover, we selected only source data from the following social networks: Twitter, Facebook, LinkedIn, YouTube, Instagram, Pinterest, Reddit, Vkontakte, Google+, 4Chan, news, forums and blogs.

Ethical Guidelines:

The DEEP-linking Youth project collects and analyses social media data to generate subsequent insights for policy-makers. Since this requires ethical consideration, we created a Code of Conduct that sets out the rules according to which the project performs 'social listening' with integrity and maintains a sense of responsibility when dealing with personal data in line with fair expectations of European citizens. An Ethics Officer was appointed for the project to verify the application of the established Code of Conduct and use the rules accordingly to safeguard project data.[10]

---

[8] https://www.coosto.com/en/homepage
[9] https://www.erasmusplus.org.uk/about-erasmus

[10] We note that the ethical guidelines and process of social listening may need altering after the General Data Protection Regulation (GDPR) comes into force.

STEP 4: The Categorisation Process

In the fourth step, we developed a classifier tool to help us with the 'categorisation process', that is to rank and prioritise the data coming from Coosto on the subject of youth mobility.

The purpose of the classifier was to train our machine learning algorithm in a way that would help us further reduce the amount of noise from our Coosto searches and ultimately allow the Dashboard to automatically sort the relevant Coosto data for display on the Dashboard while disregarding the rest.

The content classifier tool is based on the Coosto API used during the research phase for 'social listening' in STEP 2. The tool passes data collected from the queries constructed in Coosto and captures patterns in the way that humans rank each comment in terms of relevance. We set up four learning categories to thematically segment the training, which were the same ones identified in STEP 1: *Financial, Housing, University, Other*.

The classifier automatically translated messages into English (using Google translate) and the person operating the classifier could select between low, medium and high relevance for each piece of content. Content could also be marked as 'irrelevant', which would discard it from the system, or 'skipped', meaning to be classified by another person.

We determined that the content classifier required an initial training of between 5,000 and 10,000 posts to be effective. We classified 10,000 pieces of content in total, which then formed the basis of our algorithm.
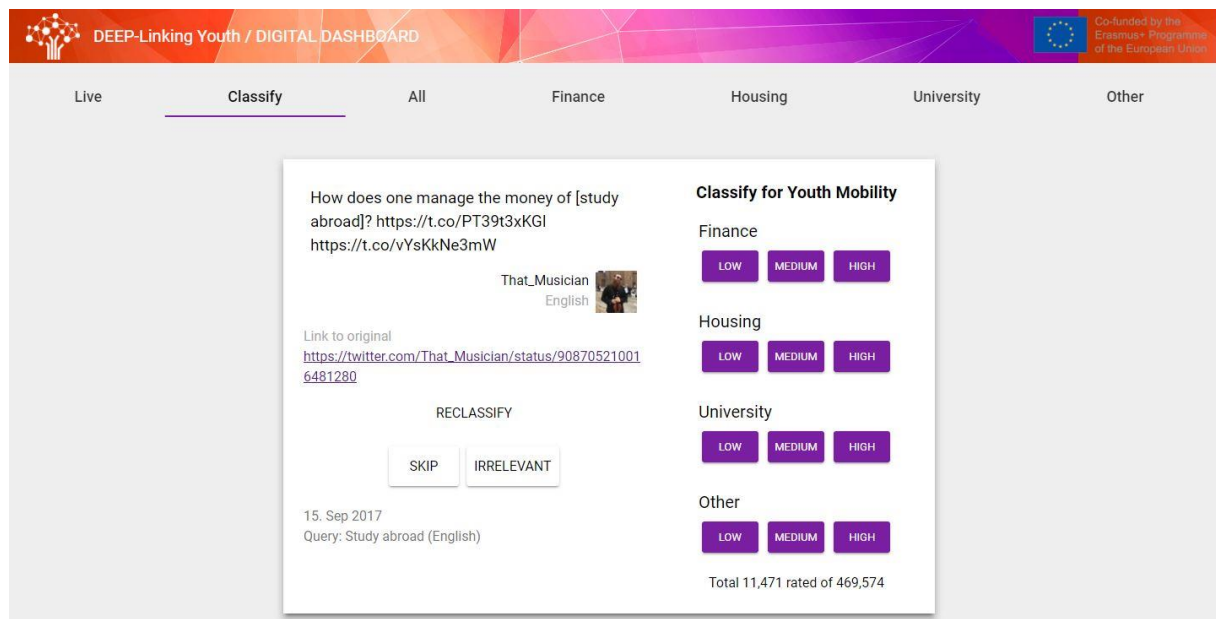
The classifier is an embedded part of the Digital Dashboard. In this sense the training can be undone or refined or updated on the fly.

STEP 5: The Dashboard

The final step was to create the Digital Dashboard[11] (a dynamic and searchable list of live content) based on the machine learning algorithm created by the classifier. The Dashboard has four thematic pages and one aggregated page. Content is pulled in periodically and each piece of content can be inspected for a link to the original source. The Dashboard incorporates some general statistics too, such as the number of total messages and breakdown of languages.

The Digital Dashboard (https://deep-y.yrpri.org/) took content from our social media monitoring software and used machine learning to filter it into a more refined set of results. A system diagram of this process is presented below:

World Wide Web

All content from all social media channels, blogs etc.

100%

Coosto Capture

Filtered to **250,000** pieces of content per month based on our general topical interests.

0.00025%

Boolean query

Filtered down to around **10,000** pieces of content per month based on geographical restrictions (e.g. Europe and other eligible countries) and specific interests such as living, working and studying abroad. Also filtered to remove duplicates and false positives.

(4%) of that collected

Content Query

Machine Learning Filter

Filtered down to around **5,000** messages per month based on 10,000 filter training sessions.

(2%) of that collected

Language Translator

Digital Dashboard

Search tool allows you to pick out specific issues based on keywords

Example – Outputs from the Digital Dashboard

Through the Digital Dashboard, we managed to extract several interesting sentiments around youth mobility ('verbatim comments' below) and we added our thoughts on how these could be used as insights for policy-makers for improving learning mobility programmes.

These are a few selected examples[12]:

Finance

There is a large amount of sentiment that the value of the grant is low compare to the cost of the experience.

Verbatim comments	Our thoughts
"Good in any case should not rely on the Erasmus grant to live! "	More can be done to set *expectations* of Erasmus students in terms of what grant will realistically cover.
"Erasmus is a bit like experiencing the lives of the poor"	This experience can actually be harnessed. Perhaps working to a budget and living in hardship is a valuable life lesson?
"As soon as I get a little money, I buy books; And when there is still something left, I buy food and clothing. D. "	What are the student essentials?
"Instead of the money free train ticket"	This could be a very good idea. Direct financing in the form of the grant could be partly exchanged for discounted commodities such as travel tickets.

Housing

There were generally few messages about accommodation, other than landlords promoting their rental units. Of the messages we intercepted about accommodation, most related to living standards and the dynamic of student living, for example:

Verbatim comments	Our thoughts
"It is nothing new, but as I have experienced this year I will tell you that, if you can avoid sharing flat with Erasmus, do it. Are the worst."	It would appear that non-Erasmus tenants are cautious about sharing with Erasmus students.
"To share flat with some girls of Erasmus I smell that I am not going to give back the deposit that I have paid" *"My house-mates are the typical ones who go to Erasmus parties. NOT ALL. But yes. That's life"*	The mix of personalities can give rise to tension. Perhaps student accommodation placement should be matched to personality types/traits.

---

[12] More details in the DEEP-linking Youth report 'Recommendations to Policy-Makers on Learning Mobility: Insights from the Digital Dashboard'

University

We identified issues regarding profiteering…

Verbatim comments	Our thoughts
"@FjerilShade Language facs with full of students Erasmus = profit" *"Funny is that they tell me that the Erasmus offer them 1 month free of language courses and I get an email saying that they are 380 €"*	Investigation is needed to see if universities are profiteering from language barriers and expose the worst offenders.
"But what do you think uniovi charging 10 euros for each language you submit to the Erasmus test (some charging 60)"	Investigation is needed to determine the impact of these charges, its implication and fairness.

… and issues regarding the application process.

Verbatim comments	Our thoughts
"It's 2 days I miss to send the application form to Erasmus, I do not hurt anyone, no one who gives me a certainty" *"When you find out that the application form for Erasmus expires on the day after tomorrow and you did not know anything. "* *"@mert_d_d @etlibrokoli Is it serious? Anyway, I forgot to make an application for Erasmus in the second year"*	A better system for deadline reminders is needed.
"they encourage everyone to go on Erasmus but there's true that bilinguals who can. 20 places for 2000 students eh "	Investigate the fairness of applications based on the language capabilities of applicants.

Other

Occasionally we found a number of general topics which challenged the theme of youth mobility:

Verbatim comments	Our thoughts
"Get international students out of migration figures and save Erasmus"	Are official migration figures being manipulated or misleading?
"Never study abroad because eventually they'll make u leave!!!". *"I want to tell her "my best advice is not to fall in love with someone in ERASMUS"*	Do you need to be mentally ready for Erasmus or take some sort of test? How can we make it easier for young European citizens to convert to residents?
"You have to think internationally at an early age. More international, more inclusive and more effective"	This is true and could be used as a hook for future youth mobility communication.
"If any of you have left Erasmus and have been sent packages with your things, with what company has it been?"	Should Erasmus organise some sort of commodity exchange or brokerage?

3.2 Limitations and Lessons Learned

As can be seen in the System Diagram, the Digital Dashboard worked well in filtering the noise from online chatter and revealed relevant content on youth mobility, representing a tiny fraction (1%) of the total online chatter. In other words, citizens expressing their opinions about youth mobility are in the minority – instead, the majority of social media content on youth mobility consisted of advertorials, news items or general 'banter'.

The social listening process was not without limitations. For example:

- Young people frequently used slang and abbreviations in their posts;
- The representativeness of the social media profile – meaning, the demographic of people who post online is not wholly representative of the population at large, although it is favourable towards youth audiences.
- We should have further analysed the discrepancy between people's online and real life;
- There are only moderate levels of trust in the authenticity of profiles and online personas, which could lead to inaccurate information and findings;
- Technical restrictions – for example, the ability to deep-search closed networks and forums, as well as limitations around real-time information sources;
- The inability to mine 'Dark Social' - which describes any web traffic not attributed to a known source, such as a social network or a Google search.

One important consideration is that, in the categorisation and organisation of data, researchers who conduct 'social listening' make conscious choices about what is and is not included on the basis of their experience. It goes without saying that the more knowledgeable you are about the subject of the Dashboard, the better you will manage to categorise the messages received.

Apart from the limitations regarding the 'social listening' process, we also identified other challenges of the Digital Dashboard, mainly regarding four issues: technical, categorisation, ethics and the topic chosen.

The identification of these limitations is not only based on our own analysis of the platform throughout the project, but also by participants of several events[13] where we presented it and allowed them to test run it.

Technical issues

The Digital Dashboard presented a series of technical issues, both in the initial BETA version and in the final platform. Most of these challenges require not only practical solutions but also further reflection on how to make the Dashboard a credible tool for policy-making purposes. These issues were mainly:

- Google translate is far from being perfect;
- Inability to identify near-duplicates (although it is able to filter exact duplicates)
- Difficulties in removing profanities while preserving relevant data;

---

[13] Events included: Digital Dashboard Launch, ECI Day 2017, LADDER project final conference, EPC FutureLab Europe events.

- Inability to recognise the difference between digital content produced by humans and by robots;
- Lack of safeguards to prevent lobbying.

Classification and categorisation issues

Although the categorisation process represents a considerable training burden, this phase is necessary to teach the machine learning algorithm for any particular subject matter. In order to lighten this process in the DEEP-linking Youth Dashboard, the following issues should be taken into consideration:

- The lack of context to conduct a proper categorisation process – the classification 'low', 'medium' and 'high' is too generic, as the relevance often depends on a specific question;
- The categories 'Finance', 'Housing', 'University' and 'others' are all still too broad – there is a need for more categories or subcategories on the basis of the intended output of the Digital Dashboard;
- An additional button should be added to flag fake news or offensive content.

Ethics issues

Although all the data gathered and shown through the Dashboard is fully public and follow legal rules, many young citizens where alarmed by seeing that we had collected and exposed all these public opinions. Their main point was that the authors of the public digital contents gathered through the Digital Dashboard were not aware of the 'social listening' process. This reaffirms the assumption that people are not completely mindful of privacy rules and policies and that once they put something online publicly they run the risk that their data is captured and can be used by others.

However, they made suggestions on how to partly solve this issue:

- A disclaimer could be added to the Digital Dashboard in order to inform people on how their digital content is going to be used and for what purpose.
- The possibility to make the details and profiles of the authors invisible, in order to anonymise the posts exposed by the Dashboard.

Limitations regarding the topic

The Digital Dashboard could capture some relevant ideas and concerns about youth mobility but these were often unfocused.

We believe that the topic of youth mobility was too broad to identify any deep policy insights with great *accuracy*, although there were a number of though provoking topics that we uncovered. Equally, we felt that the Dashboard as a 'live' concept was too hard to consume and we think that a regular email digest with a summary of the most important insights from the Dashboard would have been the most effective way for decision-makers to stay in touch with online issues and conversations.

4. Conclusions

The DEEP-linking youth project has:

- Highlighted the need to better understand the digital psychology behind young people's willingness to participate in public dialogue and to seek to influence policy-makers.

- Demonstrated the value of a Digital dashboard as a tool for gathering and extracting relevant data and subjecting it to analysis and interpretation.

In terms of our first activity (fostering young people's involvement in policy-making through digital strategies), we conclude that:

By monitoring specific online content on youth mobility, we have learned a number of things about the type of content that can gain traction and the way people are communicating about the Erasmus programme (e.g. mainly in English, mainly from Spain and mostly with positive sentiment).

We also noticed some country by country variations in terms of how Europeans use social media to convey their thoughts. For example, we noticed that Italian and Turkish content was consistently highly relevant. Similarly, German and Spanish content was proportionately more relevant than English and French content.

Due to the ferocity of Erasmus-related content, we were able to identify that the most closely associated hashtags related to youth mobility were 'travel', 'trip', 'friends' and 'love'. We consider these the learned key characteristics and social outcomes of the Erasmus programme.

More specifically, concerning the **social listening** experience, we observed that:

- Young people use social media to ask questions and express their feelings about youth mobility, but their messages are often undirected and unanswered. Often, these are simple expressions of mind or reflective of their current 'status'.

- Social listening is a useful resource for adding to insights about the programme. Social listening is most valuable when it is based on a more specific search.

- The way that social listening insights are consumed by policy-makers needs to be improved. We think that a subscription based service (email digest) based on social listening activities is more likely to be valued than a live Dashboard in the medium term.

- It is no surprise that trying to stimulate individuals on social networks through the use of compelling media is hard work. Despite this, we feel that a well-crafted stimulus *is* effective in conveying messages to youth audiences given the amount of times our content was consumed compared to the effort needed to create it. Traditional media could be an important influencer in the online space, creating a spillover effect in digital channels – as are the official EU social networking accounts. More can be done to monitor the reactions to these (such as the comments below a news piece).

- When it comes to engagement, citizens are reluctant to enter into a dialogue based on a stimulus alone and prefer simple signs of appreciation such as 'likes'.

In terms of our second activity (creation of the Digital Dashboard), we conclude that:

- The Dashboard can be used by policy-makers to reach out to, and understand, the points of view of those who actually do not participate in the decision-making process. However, it represents a **complementary tool** that cannot replace other offline forms of citizen participation.

- The Digital Dashboard cannot be considered a participatory tool as listening to young people's voices is not equal to engaging and involving them in the EU decision-making process. However, it is a tool that can be used to trigger policy ideas and solutions by seeing what challenges young people are facing.

- The timeliness of the feedback in the Dashboard is particularly advantageous. For example, it can alert policy-makers to issues as they happen. Equally, it could be used as a retrospective tool – to monitor trends over time or research what has been said about a particular topic since monitoring began.

5. Recommendations

After the implementation the DEEP-linking Youth project, our main general recommendations are:

- That stakeholders, politicians and organisations experiment with the Digital Dashboard as a tool that can complement continual engagement or as an aid to a policy-making process.

- That the Digital Dashboard is tested with a more specific or even 'controversial' topic for future research.

- That policy-makers should commission online content generated by youth audiences in the pursuit of engaging with them.

- That digital education is necessary so that more young people are educated about data mining and the repercussions of their online behaviour.

More specifically based on **the first activity,** we recommend to take into consideration the following observations when creating digital strategies for engaging young people:

- Any type of content has the potential for high engagement rates, so long as it is relatively short and meets some of the basic design rules (see overleaf);

- Amateur video with creative licence is more likely to be 'liked';

- Videos that use gimmicks to attract an audience (such as a pretty girl) will have a high number of views but will not necessarily convey messages well and can lead to poor completion rates;

- Videos that adopt humour are more likely to attract engagements such as retweets or comments, but the value of those engagements is low;

- Engagement can be increased by proactively seeking help on a problem (e.g. asking a question) or reporting on a very specific issue (such as a type of product or event);

- The time window for content exposure on Twitter is very short and for the other networks it is still precious. Publishing regularly and timely content will make communication more effective;

- Instagram has a high youth engagement rate and is ideal for engaging with prospective Erasmus students. Twitter is more likely to capture Erasmus students who are currently on a scheme or have experiences of it.

- Written words and imagery appear to be more effective than spoken words.

Basic design rules for the traction of digital video content

- The careful use of colour (e.g. red for grabbing attention, blue=trust, black=luxury);
- Topical content (e.g. time relevant);
- The presence of people in the first three seconds of the clip;
- The use of music;
- Embedding a 'feel good' factor and emotional attachment;
- The use of text or subtitles.

Based on our **second activity**, we recognise that this is the first iteration of the Digital Dashboard and improvements can be made to the accuracy of the content and range of data displayed. Our recommendations for improvements are provided in the table:

Technical issues	Categorisation issues	Ethical issues
Allow edits to relevant comments to manually adjust Google translate inaccuracies.	Clarify the context and the objective before categorising the items according to their relevancy	Add a disclaimer to inform people on how their data is being used and for what purpose
Automatically check and remove duplicate or near-duplicate posts	Create subcategories to narrow down the items into more specific subjects for policy-making	Set up notification alerts
Provide a 'refresh countdown' (the Dashboard refresh rate is limited by the rate at which the API can be called)	Add an additional button to flag fake news or offensive comment	Password protect dashboard
Allow original languages to be preserved or option to move to a non-English native Dashboard	Ability to 'load' and 'save' machine learning sets	
Enhance filters. For example, ability to filter dashboard content by individual social network		

Project background

This report is part of the project *Digital Ecosystem for E-Participation Linking Youth* (*DEEP-linking Youth*), co-funded by the European Commission.

The aim of the project is to explore how e-participation can foster young people's empowerment and active participation in democratic life. The project tests the functioning of a digital ecosystem for youth engagement by bridging technology and young citizens on a common task with the aim to provide quality input to decision-making in view of producing a sustainable impact.

The project runs from 1st of December 2015 to 30th of November 2017.

The partners of the project are the following:

The European Citizen Action Service (ECAS)
The European Citizen Action Service (ECAS) (http://www.ecas.org/) is an international non-profit organisation, based in Brussels, with a pan-European membership and 26 years of experience. It provides services to a network of about 150 civil society organisations and to numerous citizens on EU citizens' rights enforcement and civic participation in the EU decision-making process.

ECAS' mission is to empower citizens to exercise their rights and promotes open and inclusive decision-making through the provision of high quality advice, research and advocacy, as well as capacity-building for civil society organisations.

Erasmus Student Network (ESN)
The Erasmus Student Network (ESN) (www.esn.org) is the biggest non-profit organisation acting in the field of student mobility and internationalisation of higher education. It provides support services to over 180,000 international students on an annual basis and works for their needs by facilitating and improving the conditions of their mobility period, ensuring social cohesion and reintegration, and by enhancing intercultural awareness as well as active citizenship and participation in Europe.

ESN contributes to the creation of a more mobile and flexible education environment by supporting student exchanges from different levels and providing internalisation at home.

The Consultation Institute
Founded in 2003, The Consultation Institute (TCI) is a UK-based, not-for-profit organisation that has a large member base made up primarily of local authorities, utility companies and software providers.

The Consultation Institute's mission is to promote the highest standards of public, stakeholder and employee consultation by initiating research, publications and specialist events in order to disseminate best practices and improve subsequent decision-making.

TCI undertakes training, consultancy, evaluation, quality assurance and benchmarking across the spectrum of consultation opportunities and has an active interest in social media and the role of digital dialogues for policymakers.

Civil Kollégium Alapítvány (Civil College Foundation)

Civil College Foundation (CCF) is a nationwide adult education organization focusing on community development, community work and citizen studies. Over the last 20 years, CCF has become a leading organisation in civil society development in Hungary, with intensive connections and a strong network with several hundred civil society organisations and local communities across Hungary and with outreach to and collaboration with many European and some U.S. partners.

CCF is involved in the activities of several working structures in order to represent the interests of citizen and community participation in the decision-making processes both at the national and international level.

ProInfo Foundation

ProInfo is a Bulgarian not-for-profit organisation involved in strengthening citizen participation at national, cross-border and European level.

It serves as a civic resource centre on European matters, assisting the process of civic capacity building for effective participation in the European policy-making process and the strengthening of the European identity of Bulgarian citizens.

ProInfo also has vast experience in the creation of media content for TV and on-line distribution, including specialized resources on focused EU – related news and Television series on citizen participation, integration of minorities, economic policy and more.

Gong

GONG is an independent, non-partisan and non-governmental organisation promoting human and citizens' rights. It represents one of Croatia's most influential and outspoken public policy advocacy organisations, engaged in a number of legislative and policy monitoring initiatives geared towards greater transparency and fairness of the electoral process, management of conflict of interest of public officials, improved access to information, more inclusive policy-making, greater accountability and quality of governance of national and local public authorities, and encouraging civic participation.

Its goals include reaching the highest possible democratic standards of the electoral system, high standards of governance and political accountability, and active, yet responsible participation of citizens and CSOs in decision-making processes at regional, national and EU level.

Íbúar samráðslýðræði ses - Citizens Foundation

Citizens Foundation is a non-profit organisation that works to bring people together to debate and prioritize innovative ideas to improve their communities. Since 2008, Citizens Foundation has developed open source tools and methods to promote online, democratic debate and to increase citizens' participation in their community in Iceland and worldwide. It developed the online open source e-democracy platform "Your Priorities" that allows people to start their own e-democracy website, submit ideas, vote to support or oppose ideas, and debate ideas.

Its main goal is to help citizens get their voices heard and to encourage citizens participation in governance.