

P1 - UPB

Survey process for BEST PRACTICES COLLECTION and for ASSESSING THE IMPACT of project key variables support for Best Practice Handbook Intercultural Student–Centered Learning Resources part of O4/A1-A2 activities

Project Objective PO4

Spread out and multiply the results and benefits of the Innovative SCL Practices by ensuring the widest possible dissemination of outputs and outcomes to the multicultural university – industry cooperation.

Intellectual Output – O4

Best Practice Handbook for intercultural SCL resources

O4/A1 activity description:

Design impact survey methodology to assess the outcomes of personalized learning practices and ICT –based methods on project target groups, considering project key variables.

Activity A1

- communicate, discuss and jointly agree on the respondents' sample size, typology, and survey variables
- design: questionnaire structure, questions types, and measurements scales; methods for data collection: on-line through functionalities of e-platform and follow-up sessions for teachers and stakeholders' satisfaction and impact analyses
- design key variables: digital and critical thinking skills; intercultural and civic attitudes; university – industry cooperation

O4/A2 activity description:

Perform data collection, follow-up sessions with target group, and data processing to measure changes on research variables, identify and analyse lessons learnt.

Activity A2

- the degree to which digital teaching modules and personalised knowledge resources responded to the needs of the local labour market industry and society
- jointly analyse key variables: digital and critical thinking skills; intercultural and civic attitudes; university – industry cooperation
- the degree to which the new pedagogical methods have been used
- jointly analyse, statically compute the field data, aggregate, and harmonize the survey results per each country

Participants – target group

Students with enhanced entrepreneurial and innovation skills and improved learning performance within RO, BG, SK, and PO.

Objectives of survey process for Best Practices Collection and for Assessing the Impact of project key variables

The research objectives consist in:

- 1. Design the survey process** for best practices collection and for assessing the impact of project key variables: digital and critical thinking skills; intercultural and civic attitudes; university – industry cooperation, on TGs
- 2. To collect, statistically compute**, extract findings, and document best practices and lessons learnt into the core processes roadmap needed to deploy SCL approach in interdisciplinary and multicultural contexts.

Participants at statistical research:

Teachers/researchers and technical from each P1/P4/P5/ P6:

1. Methodology for primary research on the target group sample

The process of collecting relevant students view was performed during the interval of M19 to M28 months. The method for collecting data was electronic based through the on-line Google Forms, embedded in the project e-platform at the following address:

- For general survey on project e-platform: <http://bit.ly/2N08UwZ> (must be log in)
- For Romanian students with enhanced competences: <http://bit.ly/39nbBkC>
- For Bulgarian students with enhanced competences: <http://bit.ly/39p1uf9>
- For Slovakian students with enhanced competences: <http://bit.ly/2UBOzm5>
- For Polish students with enhanced competences: <http://bit.ly/2UBD3qN>

The process of collecting from **students** with enhanced entrepreneurial and innovation skills and improved learning performance: from RO, BG, SK, and PL.

As primary data sources (data obtained directly from the **university partner students**), it has been used information collected during the interval M19 to M28 months.

The questionnaire and results analysis, as well as their adaptation, were achieved through the participation of all project partners. They were involved in creating and implementing the questionnaire to ensure quality based on their expertise and experience. The activity manager was **P4**, who coordinated and assured the creation and implementation of the questionnaire according to the quality manual. At partner level for adapting to local specifics, decisions were taken by each partner's Local Project Meetings partner (LPM) partner. Each project partner used local utility to implement communication with students.

The following steps for creating the questionnaire are described below:

1.1 Specifying desired information and research objectives

The identification of the information and objectives was performed by extracting them from the general purpose of the project and from PO4, based on

- to design the content of digital teaching modules with intercultural views deeply embedded in entrepreneurial learning concept, customized on each of the fields in BEE education
- to define, articulate and harmonize the personalized knowledge resources based on capturing the needs and learning expectations of local businesses, labour market, and civil society sectors from RO, BG, SK, and PO cultures.

1.2 Establish the method of data collection and elaboration of questions: content, type, quality, order, pre-modification.

It has been decided that the best way to collect valuable information is through the questionnaire. Other options included face-to-face interviews and project e-learn platform. Each method has advantages and disadvantages and has been analysed against the level of quality, the number of respondents to reach, the degree of complexity, the availability of the participation of the respondents and the available staff.

1.3 Design the physical characteristics of the questionnaire

We have analysed the variants of questions: structured, unstructured, or a combination of the two. The difficulty with unstructured ones lies in the weight of the analysis of the answers and their structuring in a worksheet. For precision of results and ease of completing the questionnaire, it was proposed and decided to use the partially structured questions in order to alleviate the disadvantages of both variants.

1.4 Approval of the questionnaire

At the end of the structure of the questionnaire, the quality team analysed and concluded that it responds to the objectives originally proposed.

1.5 Preparing the final version and translating the questionnaire

At this stage each leader from the partner and his team adapted to local needs and translated the questions. The research unit was a small group of students. The survey unit was the employed that provided the information. The information obtained is relevant and gives an image of real-life problems of students, relevant achievements in the sector and challenges and opportunities in order to create base for **study case development, best practices/case examples, scenarios and project-based applications.**

2. Research Variables

The research variables were built on target group profile to coherently embrace the characteristics, perceptions and results for students involved, as follow:

The research variables aim at analysing the views of students in BEE education area: the degree of fulfilment in learning outcomes per discipline, and the value added by the personalized learning experiences through:

Objectives dimensions

- Ob.1. To identifying and defining Digital and Critical Thinking
- Ob.2. To identifying and defining Intercultural and civic attitudes
- Ob.3. To identifying and defining University-Industry cooperation
- Ob.4. Personalised learning practices

which have been divided into five categories:

2.1 Respondents profile:

- ✓ Level of study
- ✓ University of study
- ✓ Specialisation area at the University
- ✓ Your gender

2.2 To identifying and defining Digital and Critical Thinking

- ✓ Importance of digital and critical thinking skills
- ✓ Capacity to develop digital and critical thinking skills
- ✓ Importance of capacity to use (e-learning tools)
- ✓ The degree to which personalized knowledge resource respond to the needs (to use e-learning tools)
- ✓ Importance of Learning Process
- ✓ The degree of new pedagogical methods will be used.

2.3 Capacity to develop intercultural and civic attitudes

- ✓ Importance of communication ability
- ✓ Capacity to develop communication attitudes
- ✓ Importance of - teamwork ability
- ✓ Capacity to apply -teamwork ability
- ✓ Importance of Adaptability and Flexibility skills
- ✓ Capacity to apply Adaptability and Flexibility skills
- ✓ Importance of Self-Evaluation skill
- ✓ Capacity to make suitable and opportune decisions for life

2.4 Perception about University-Industry cooperation

- ✓ Barriers for starting a new business, that are linked with your domain
- ✓ Reason for working for/ with an organisation
- ✓ Useful activities needed for developing your entrepreneurial skills and knowledge
- ✓ Qualities needed for being a successful person at the job

2.5 Personalized learning (resources) practices

- ✓ Learning type would you prefer for learning
- ✓ New pedagogical methods that be used
- ✓ Importance of Problem-solving method
- ✓ The degree to which digital teaching modules respond to the needs

2.1 Respondents profile

Students profile aims to analyse certain demographic characterizes such as: level of study (bachelor/ master/PhD), the name of partners university or other university, due to the large number of areas of study should be indicate the specialisations. The basic variables in this case it was:

- ✓ Level of study
- ✓ University of study
- ✓ Specialisation area at the University
- ✓ Your gender

2.2 To identifying and defining Digital and Critical Thinking

Research on real-life problems aims to capturing the real needs, enrich teaching, improve learning experience to contribute at students' skills in a competitive market and support learning expectation of local business, labour market and civil society from RO, BG, SK, PL cultures.

- ✓ Capacity to develop digital and critical thinking skills
- ✓ Importance of capacity to use (e-learning tools)
- ✓ The degree to which personalized knowledge resource respond to the needs (to use e-learning tools)
- ✓ Importance of Learning Process
- ✓ The degree of new pedagogical methods will be used.

2.3 Capacity to develop intercultural and civic attitudes

Research for validating innovative and entrepreneurial educational offer, including digital and critical thinking skills, and intercultural and civic attitudes for BEE students, by engaging them in multidisciplinary and intercultural digital personalized learning experiences. The basic variables in this case it was:

- ✓ Capacity to develop communication for better intercultural and civic attitudes - base on importance of communication ability is being watched level of importance
- ✓ *Ability of communication* -base on *identify* the agreement or disagreement for more proposal's types of affirmation
- ✓ *Capacity to develop teamwork attitudes for better results* - base on capacity to develop teamwork attitudes is being watched level of importance
- ✓ *Teamwork ability* - identify the agreement or disagreement for more proposal's types of affirmation
- ✓ *Identifying capacity to be adaptably and flexible for better intercultural and civic attitudes* – base on capacity to be adaptably and flexible for better intercultural and civic attitudes is being watched level of importance
- ✓ *Adaptability and Flexibility skills* - identify the agreement or disagreement for more proposal's types of affirmation
- ✓ *Identifying capacity for Self-Evaluation skill* - base on capacity to develop teamwork attitudes is being watched level of importance
- ✓ *Capacity to make suitable and opportune decisions for life* - identify the agreement or disagreement for more proposal's types of affirmation

2.4 Perception about University-Industry cooperation

Research about results of educational processes for adaptation of curricula and teaching practices to labour-market, going beyond the good practices through the augmented knowledge base of university-industry cooperation. The basic variables in this case it was:

- ✓ *Barriers for starting a new business* - by selecting the most important one from a list of options
- ✓ Important reasons to work for/ with an organisation (against own business) - by choosing the most suitable one from a list of options
- ✓ Useful activities needed for developing entrepreneurial skills and knowledge - by choosing the most suitable one from a list of options
- ✓ Important qualities needed for being a successful person at the job - by selecting the most important one from a list of options

2.5 Personalized learning (resources) practices

Research on needs to personalized learning methodologies and customized pedagogical tools, during interdisciplinary and multicultural cooperation between BEE education areas and different industries stakeholders. The basic variables in this case it was:

- ✓ *Suitable learning methods* - by selecting the most important one from a list of options
- ✓ Pedagogical methods have been used and rank about importance of learning resource - base on preferred learning resources is being watched level of importance
- ✓ *Problem solving method* - base on preferred learning methods is being watched level of importance
- ✓ *Teaching learning practices if respond to the needs* – base on identify the agreement or disagreement for more proposal's types of affirmation
- ✓ *Ability to use analytical method* - at level of ability is being watched the level of importance
- ✓ *Teaching learning practices use analytical method* - base on identify the agreement or disagreement for more proposal's types of affirmation

3. Target group/ Sample Description - Practitioners and/ or professionals from company

The research was conducted on a sample of 139 respondents, we would have wanted to have a much larger sample. It was difficult to convince a large number of students to participate. Possible reasons for this attitude might be:

- hesitation to admit they ignore this field, although we included in the questionnaire clarifying definitions/explanations of the concepts used.
- lack of time, although the questionnaire may be completed in 30-35 minutes.
- lack of interest.

Elements of innovation are linked to:

- tested and improved patterns of SCL pedagogical processes to get the acquisition of right mix of entrepreneurial, digital and civic skills for students from different fields of education and specializations.
- pull of recalibrated educational processes for adaptation of curricula and teaching practices to labour-market, going beyond the good practices through the augmented knowledge base of university-industry cooperation.

Information gathering was done in online questionnaire define as a Google Form, accessed through the site <http://bit.ly/2N08UwZ> (must be log in), or directly to Google Form:

The results from the first panel defining profile of respondents show the profile of **Romanian Students from the University Politehnica of Bucharest** participating in the project survey.

These were for each partner country respondents.

4. RESULTS: Students from Romanian university

Respondents profile

Level of study

- ✓ Bachelor studies 61
- ✓ Master studies 0



Student at the University

- ✓ University POLITEHNICA Of Bucharest

Gender respondents

- ✓ Man 28
- ✓ Woman 33

Fig.3 Respondents creativity and Innovation skill
 Source: Author’s own realization based on the surveyed data

Ob.1. To identifying and defining Digital and Critical Thinking

4.1 Capacity to develop digital and critical thinking skills. Creativity and Innovation skill

Level of importance:

- ✓ Not at all important = 0
- ✓ Less important = 0
- ✓ Indifferent = 0
- ✓ Important = 32 (56%)
- ✓ Very important = 25 (44%)

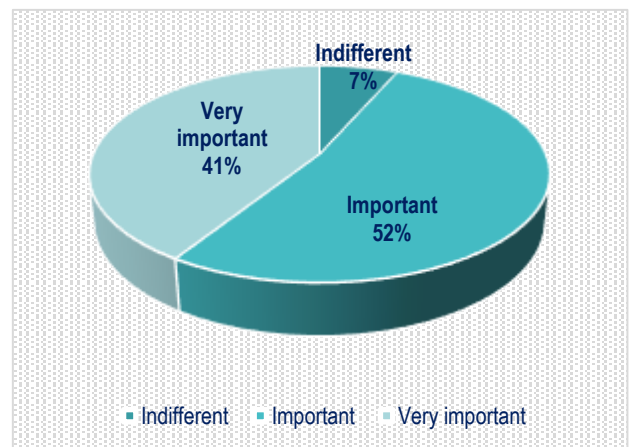


Fig.3 Respondents creativity and Innovation skill
 Source: Author’s own realization based on the surveyed data

Comments:

4.2. (Creativity and Innovation) For following affirmation mark the degree of acceptance

The degree of acceptance:

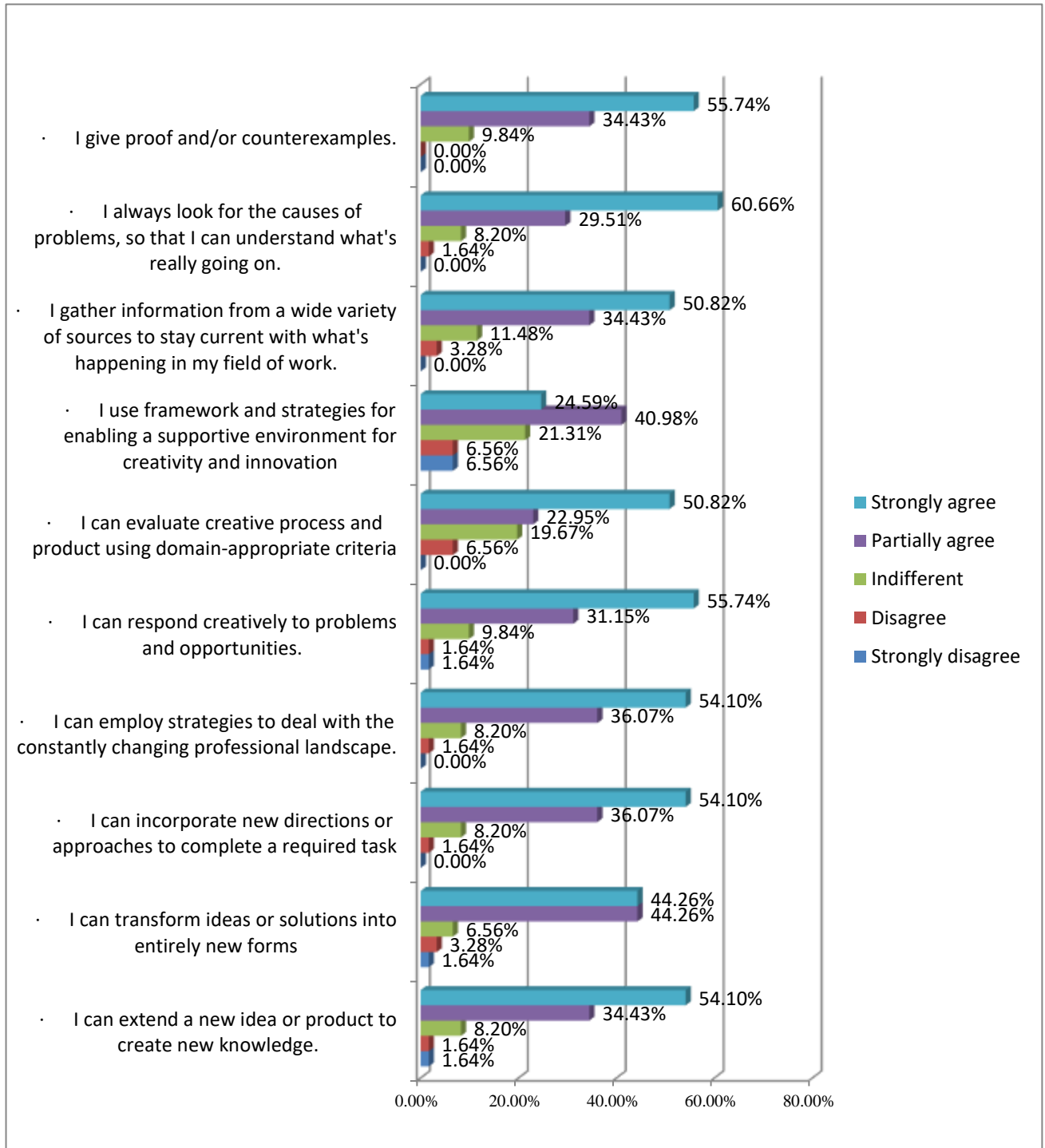


Fig.4 Respondents the degree of acceptance

Source: Author's own realization based on the surveyed data

Comments:

Regarding the degree of acceptance about creativity and innovation, the respondents strongly agreed with always looking for the causes of problems so that they understand what is really going on and also they are able to respond creatively to problems and opportunities, in the same time with providing proofs and /or counterexamples.

They partially agreed with transform ideas or solution into entirely new forms and using framework and strategies for enabling a supportive environment for creativity and innovation.

4.3 Learning through digital content

Level of importance

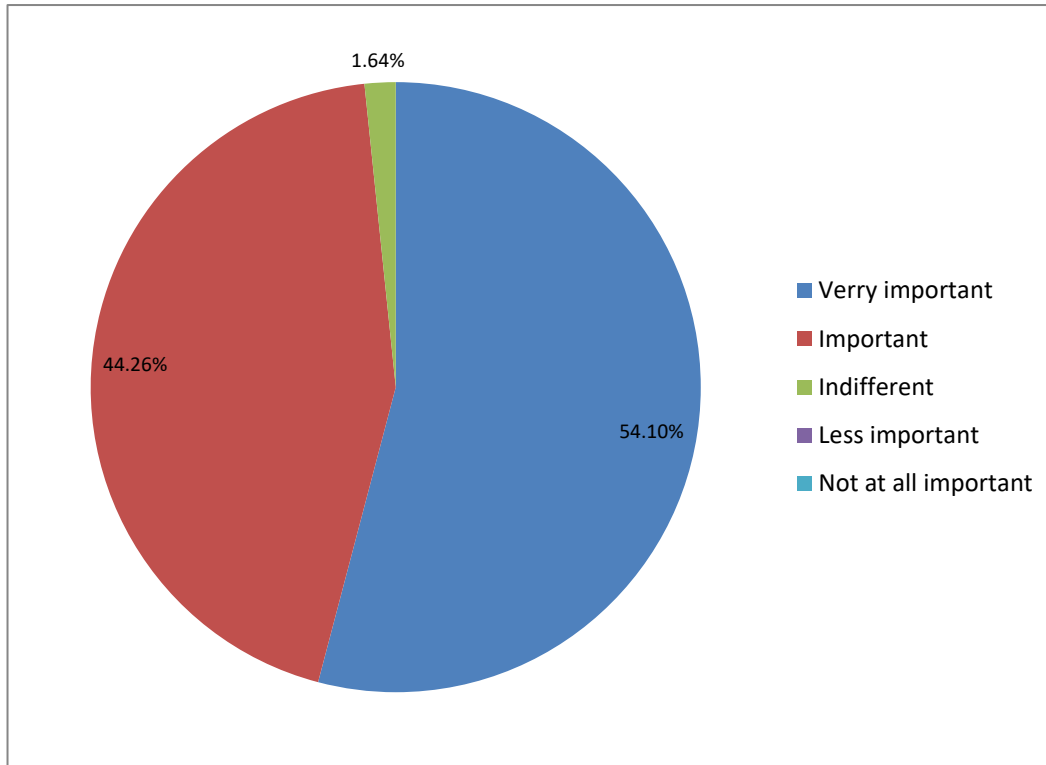


Fig.5 Respondents learning through digital content

Source: Author’s own realization based on the surveyed data

Comments:

We can see that more than 50% of the surveyed group consider learning through digital content “very important”, more than 40% consider it “important”, almost 2% are “indifferent” and none of them consider it “less important” or “not at all important”.

4.4 (Digital Content) Capacity to use e-learning tools. For following affirmation mark the degree of acceptance

The degree of acceptance

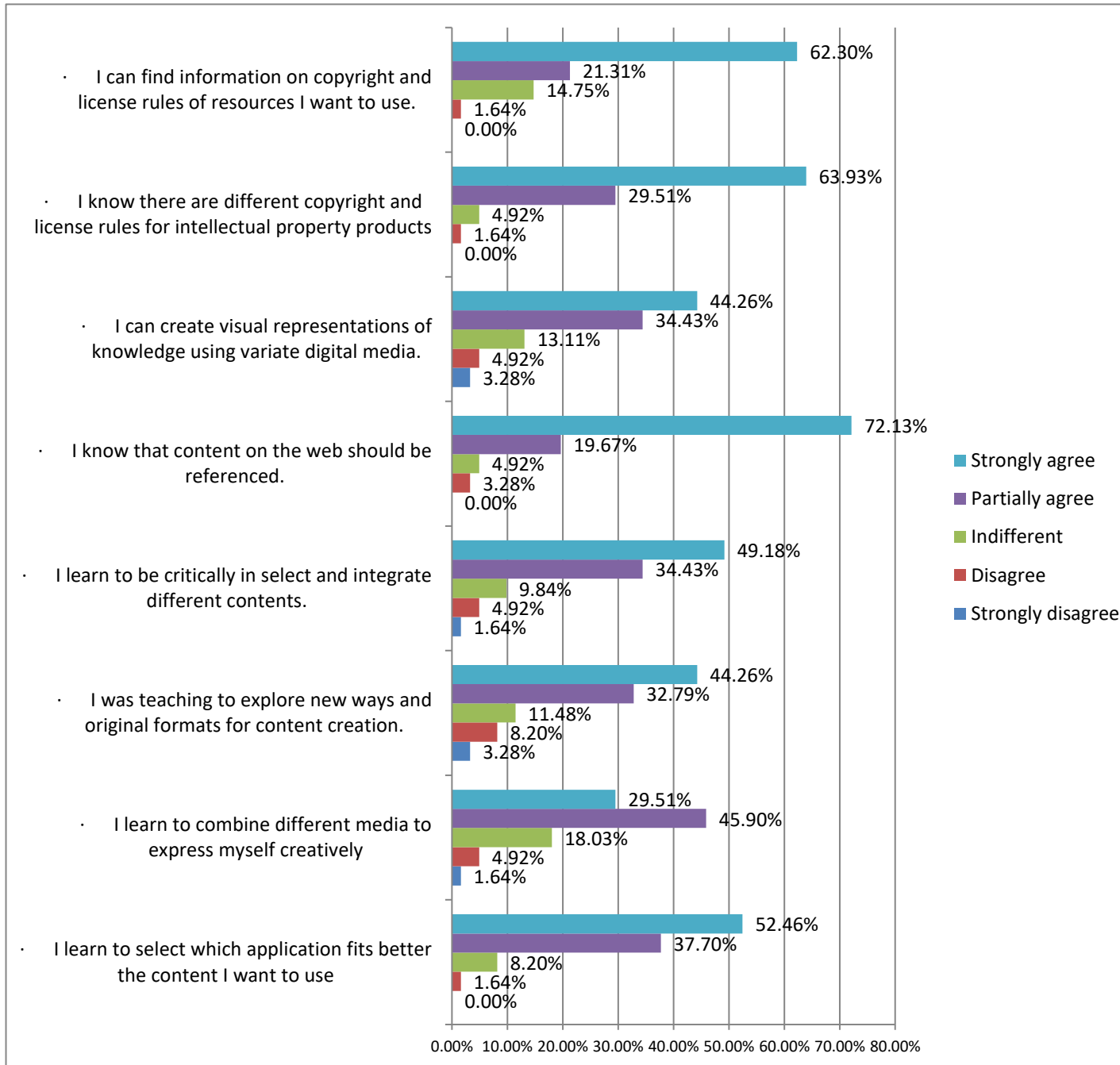


Fig.6 Respondents' acceptance degree

Source: Author's own realization based on the surveyed data

Comments:

Regarding the acceptance degree of the capacity to use e-learning tools, the respondents strongly agreed that they know that content on the web should be referenced and also they know there are different copyright and license rules for intellectual property products. Those affirmations are followed by the affirmation "I can find information on copyright and license rules of resources I want to use".

At the opposite corner looking to the degree of acceptance of the capacity to use e-learning tools, the respondents strongly disagree (3.28%) with the affirmations: "I was teaching to explore new ways and original formats for content creation" and "I can create visual representations of knowledge using various digital media".

We can see that although we have opposite sides regarding the affirmations so we can't compare the percentage of the respondents who strongly agreed with the respondents who strongly disagreed. We have a percentage of almost 73% of the respondents who strongly agreed and a percentage of almost 3.5% of the respondent who strongly disagree. The highest percent regarding the respondents who are indifferent is for the affirmation: "I can find information on copyright and license rules of resources I want to use." (14.75%)

4.5 Learning Process / Skills to improve the learning process

Level of importance

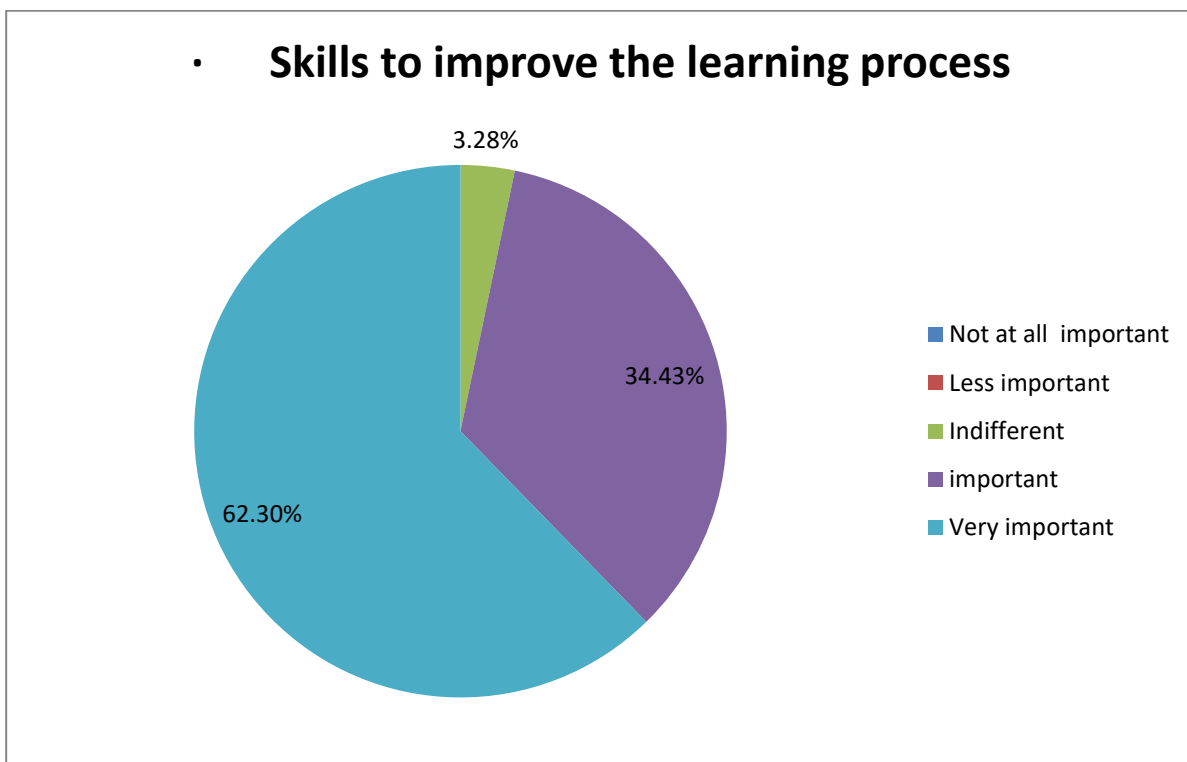


Fig.7 Respondents Level of importance

Source: Author's own realization based on the surveyed data

Comments:

Regarding the skills to be used in order to improve the learning process, respondents consider this issue very important (almost 63%), more than 30% consider it important and almost 3.5% of the respondents are indifferent.

4.6 (Learning Process) The degree of new pedagogical methods will be used. For following affirmation mark the degree of acceptance

The degree of acceptance

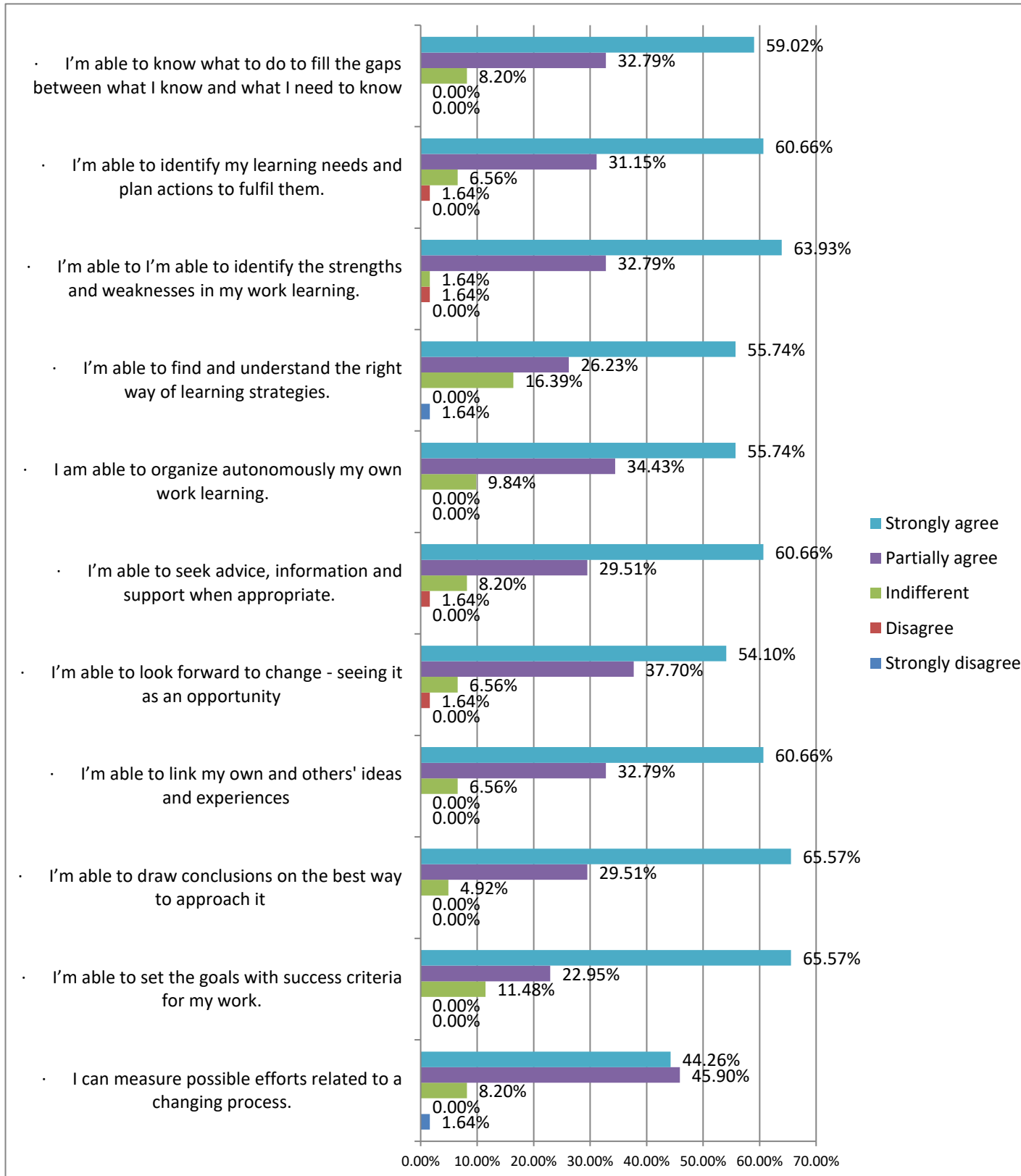


Fig.8 Respondents the degree of acceptance
 Source: Author's own realization based on the surveyed data

Comments:

Regarding the degree of acceptance of new pedagogical methods, the respondents strongly agreed the affirmation: "I'm able to set the goals with success criteria for my work". We find an equally split among respondents (65.57%) between this affirmation and the "I'm able to draw conclusions on the best way to approach it".

Opposite view, iterated by 1.64%, prove that respondents strongly disagreed with the affirmation: "I can measure possible efforts related to a changing process" and also with the affirmation: "I'm able to find and understand the right way of learning strategies".

For the statement: "I'm able to find and understand the right way of learning strategies" we have a percent of 16.39% of indifferent choice between our respondents which is the highest indifferent percent between all the affirmations.

Ob.2. To identifying and defining Intercultural and civic attitudes

5.1 Capacity to develop communication for better intercultural and civic attitudes

Level of importance

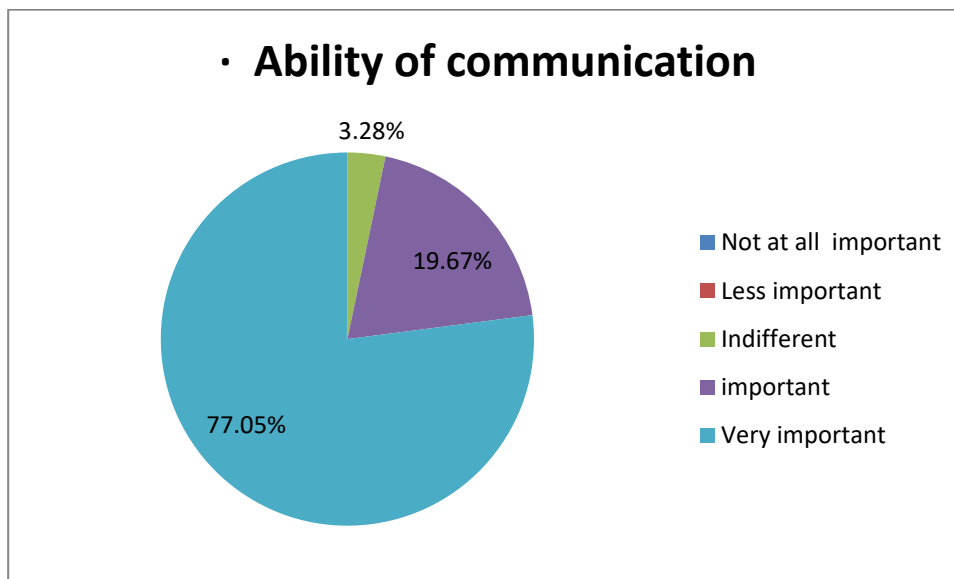


Fig.9 Respondents Level of importance

Source: Author's own realization based on the surveyed data

Comments:

Regarding the ability of communication we can see that more than 75% of our respondents consider this capacity very important, followed by an almost 20% of "important" answers. Only 3.28% of the respondents are indifferent.

5.2 (Ability of communication) For following affirmation mark the degree of acceptance

The degree of acceptance

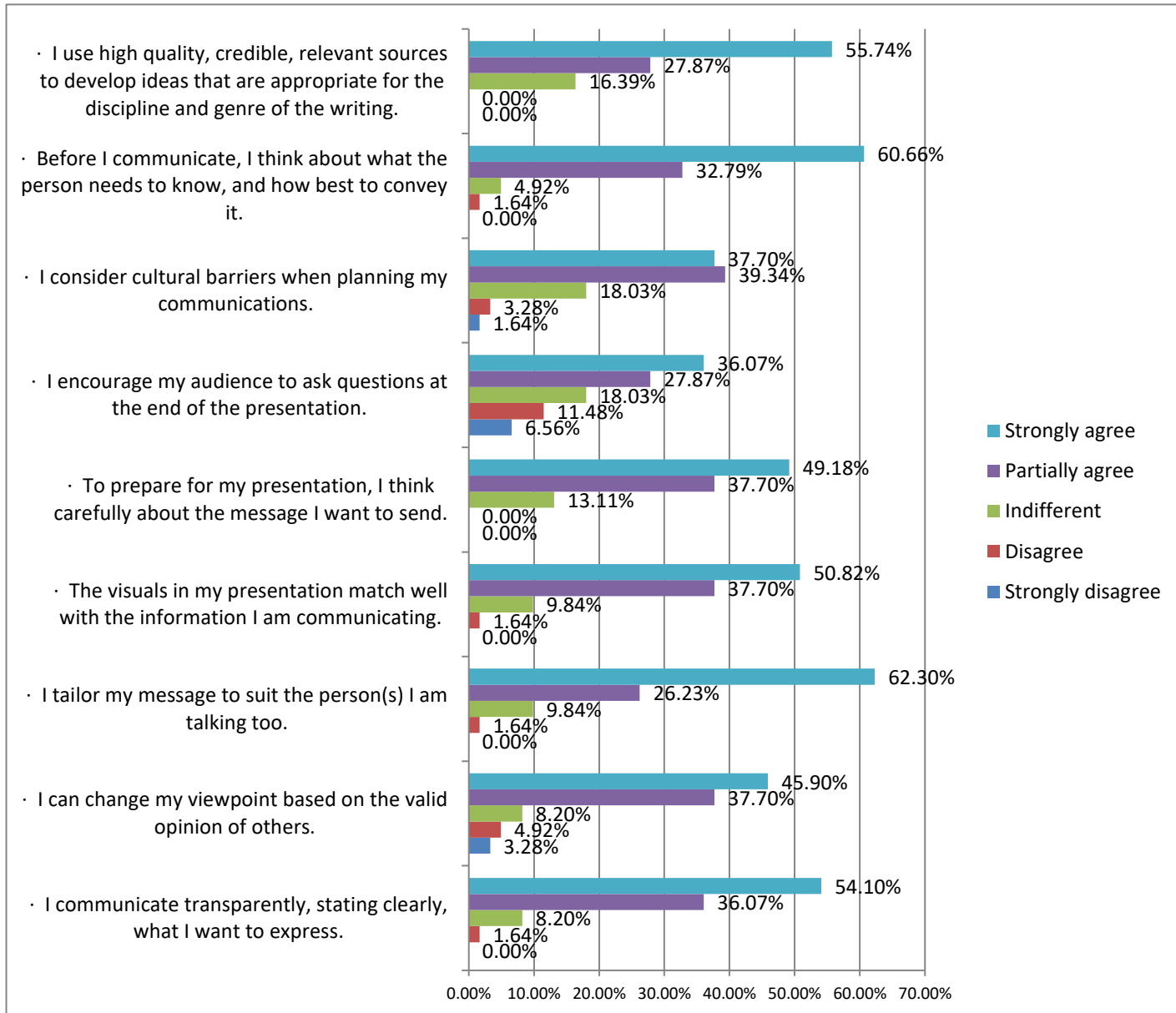


Fig.10 Respondents acceptance degree

Source: Author's own realization based on the surveyed data

Comments:

Regarding the degree of acceptance of the ability of communication, our respondents strongly agree that they tailored their message to suit the persons they are talking too and also strongly agree that before they communicate, they think about what the person needs to know, and how best to convey it.

At the opposite corner our respondents strongly disagree (almost 7%) with the affirmation "I encourage my audience to ask questions at the end of the presentation."

We find an equally split between the indifferent respondents (18.03%) for the affirmations: "I encourage my audience to ask questions at the end of the presentation" and "I consider cultural barriers when planning my communications."

5.3. Capacity to develop teamwork attitudes for better results

Level of importance

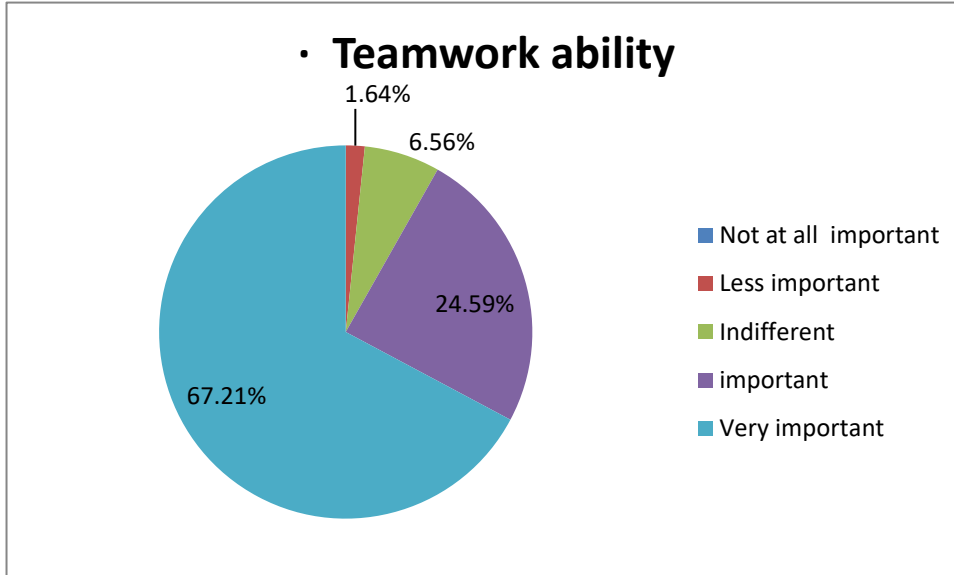


Fig.11 Respondents Level of importance

Source: Author’s own realization based on the surveyed data

Comments:

Regarding the capacity to develop teamwork attitudes for better results, more than 65% of the respondents consider teamwork ability a very important one, more than 20% consider it important, almost 7% are indifferent meanwhile almost 2% (which is a poor number) consider it less important.

5.4. (Teamwork ability) For following affirmation mark the degree of acceptance

The degree of acceptance

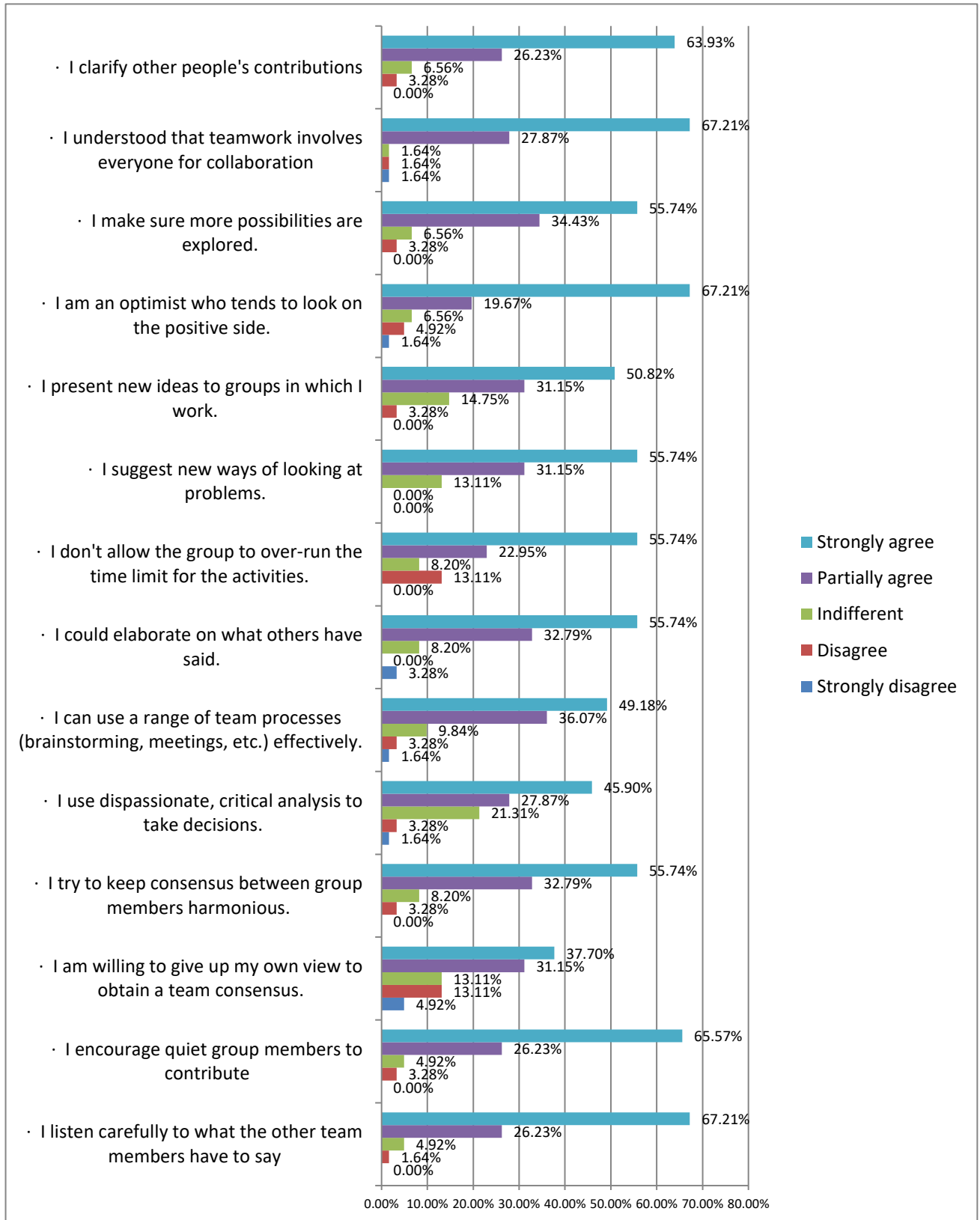


Fig.12 Respondents the degree of acceptance

Source: Author’s own realization based on the surveyed data

Comments:

Regarding the degree of acceptance for teamwork ability, our respondents strongly agree with the affirmations: " I understood that teamwork involves everyone for collaboration", " I am an optimist who tends to look on the positive side" and "I listen carefully to what the other team members have to say" (67.21%).

At the opposite corner they strongly disagree with the statement: " I could elaborate on what others have said.", with a poor percentage of only 3.28%.

We have the highest score for indifference of the respondents for the affirmation: "I use dispassionate, critical analysis to take decisions" with a percentage of (21.31%) which is the highest percentage among the indifferent opinions.

5.5 Identifying capacity to be adaptably and flexible for better intercultural and civic attitudes

Level of importance

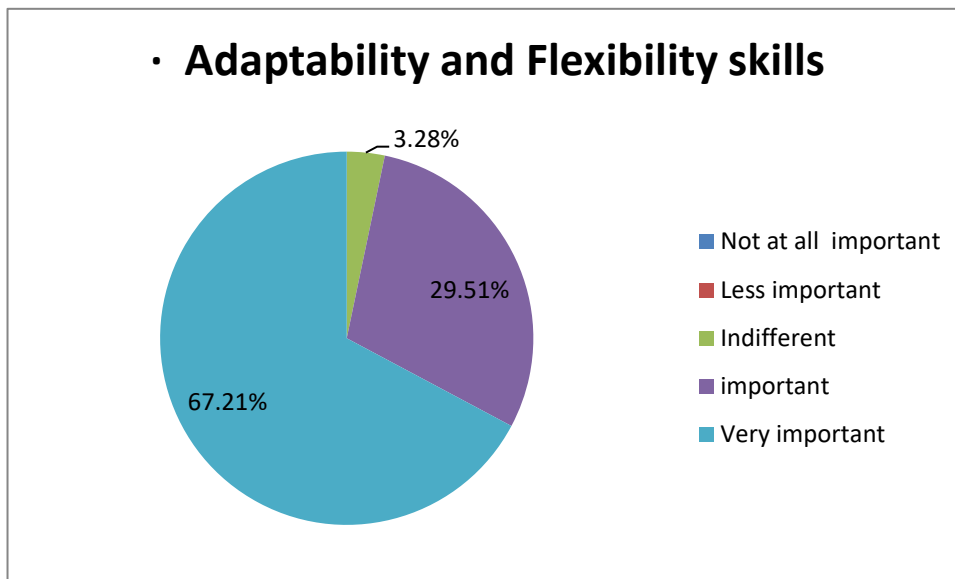


Fig.13 Level of importance for adaptability and flexibility skills

Source: Author’s own realization based on the surveyed data

Comments:

Regarding the capacity to have adaptable and flexible skills, more than 65% of the respondents consider it very important, almost 30% consider it important and a poor percentage (3.28%) are indifferent. We don’t have respondents (0%) that consider it not at all important or less important.

5.6 (Adaptability and Flexibility) For following affirmation mark the degree of acceptance

The degree of acceptance

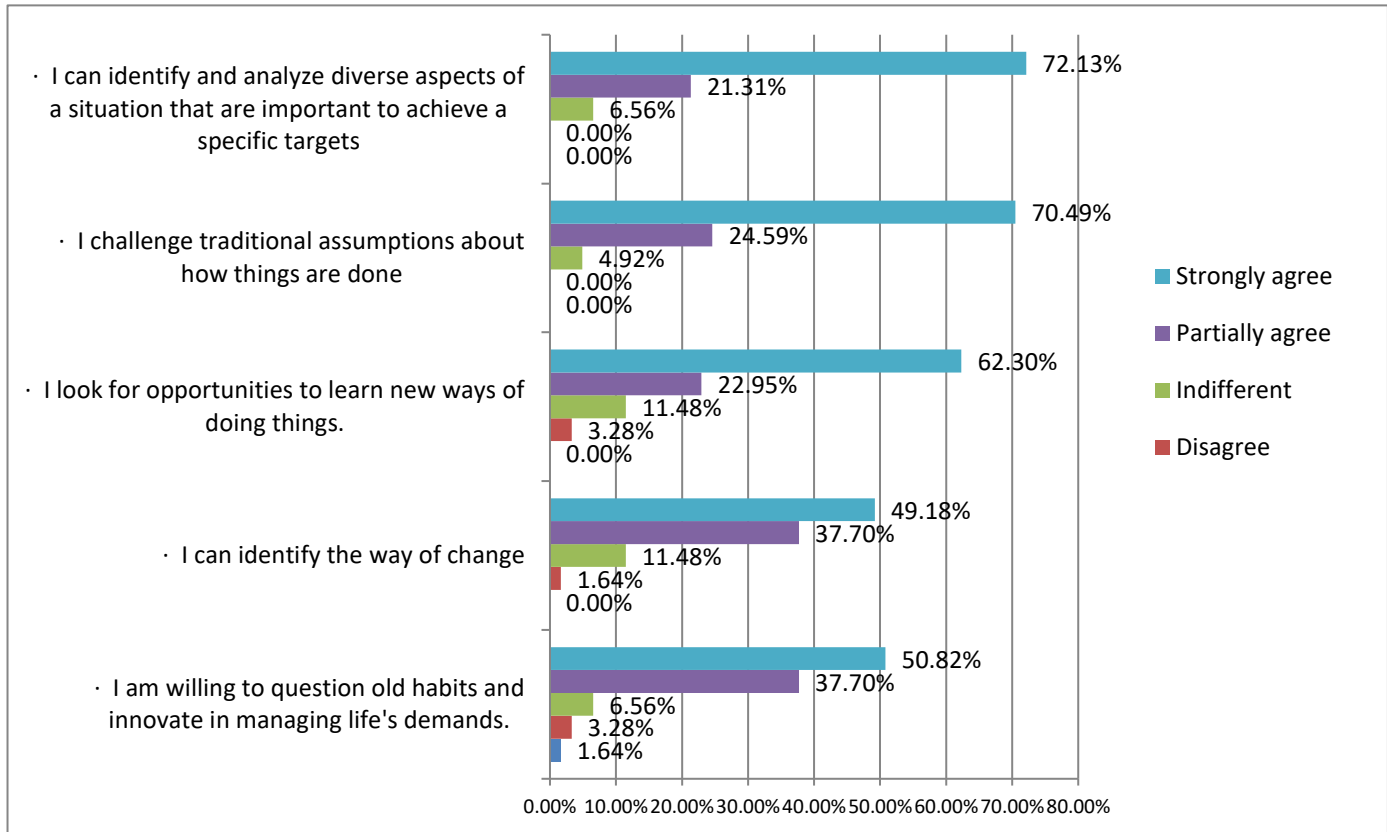


Fig.14 Respondents acceptance degree for adaptability and flexibility

Source: Author’s own realization based on the surveyed data

Comments:

Regarding the degree of acceptance for adaptability and flexibility, our respondents strongly agreed with the affirmation “ I can identify and analyze diverse aspects of a situation that are important to achieve a specific targets” (72.13%), closely followed (70.49%) by the affirmation “I challenge traditional assumptions about how things are done”. At the opposite corner, with a poor percentage (1.64%) our respondents strongly disagreed with the affirmation: “ I am willing to question old habits and innovate in managing life's demands.”

5.7 Identifying capacity for Self-Evaluation for better intercultural and civic attitudes

Level of importance

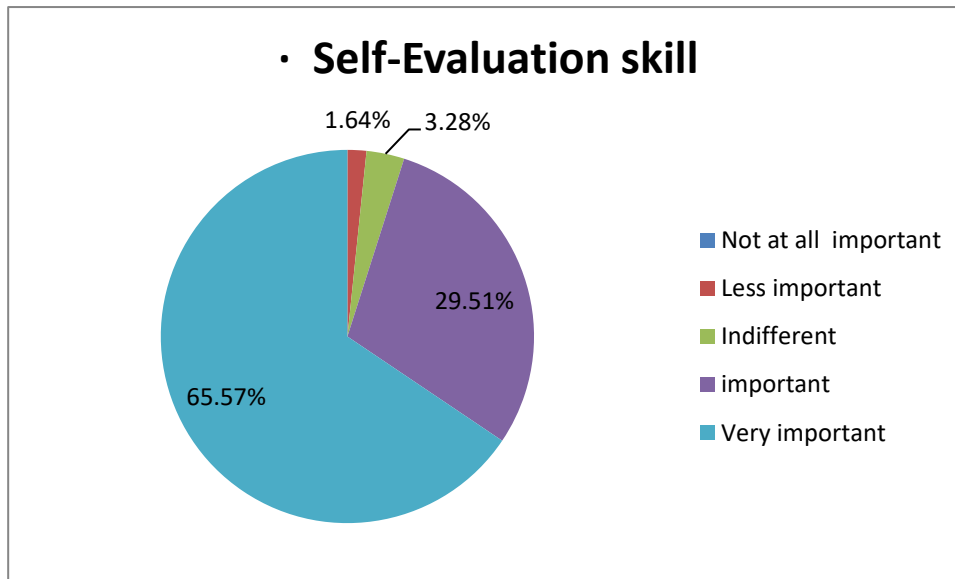


Fig.15 Respondents' valuing self-evaluation skills
 Source: Author's own realization based on the surveyed data
 Comments:

Regarding the level of importance for self-evaluation skill more than 65% of our respondents consider this skill very important, almost 30% consider it important, 3.28% are indifferent and almost 2% consider it less important.

5.8 (Self-Evaluation) Capacity to make suitable and oportune decisions for life. For following affirmation mark the degree of acceptance

The degree of acceptance

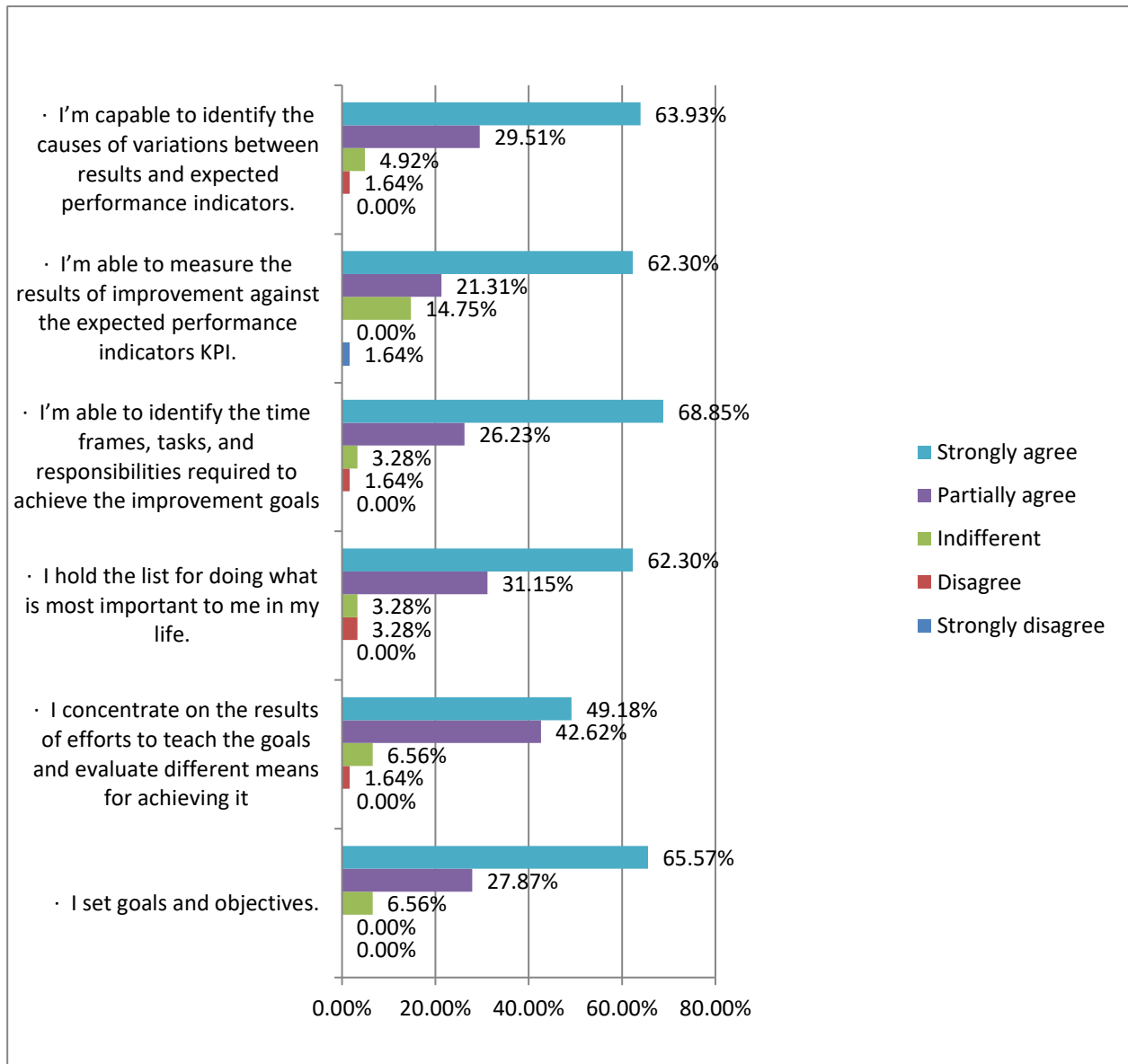


Fig.16 Respondents the degree of acceptance

Source: Author's own realization based on the surveyed data

Comments:

Regarding the degree of acceptance for "(Self-Evaluation) capacity to make suitable and opportune decisions for life", our respondents strongly agree with the statement: "I'm able to identify the time frames, tasks, and responsibilities required to achieve the improvement goals" (68.85%), closely followed by the affirmation: "I set goals and objectives" (65.57%) and the affirmation "I'm capable to identify the causes of variations between results and expected performance indicators" (63.93%).

At the opposite corner, our respondents strongly disagree with the affirmation "I'm able to measure the results of improvement against the expected performance indicators KPI" (1.64%- which is a poor percentage).

Almost 15% of the respondents are indifferent with the affirmation: "I'm able to measure the results of improvement against the expected performance indicators KPI."

Almost 45% of the respondents partially agree with the affirmation "I concentrate on the results of efforts to teach the goals and evaluate different means for achieving it" (42.62% which is the highest level of partially agree between the answers given by our respondents from all the affirmations.)

Ob.3 Perception about University-Industry cooperation

6.1 Please mention the top three barriers for starting a new business, that are linked with your domain (three choices):

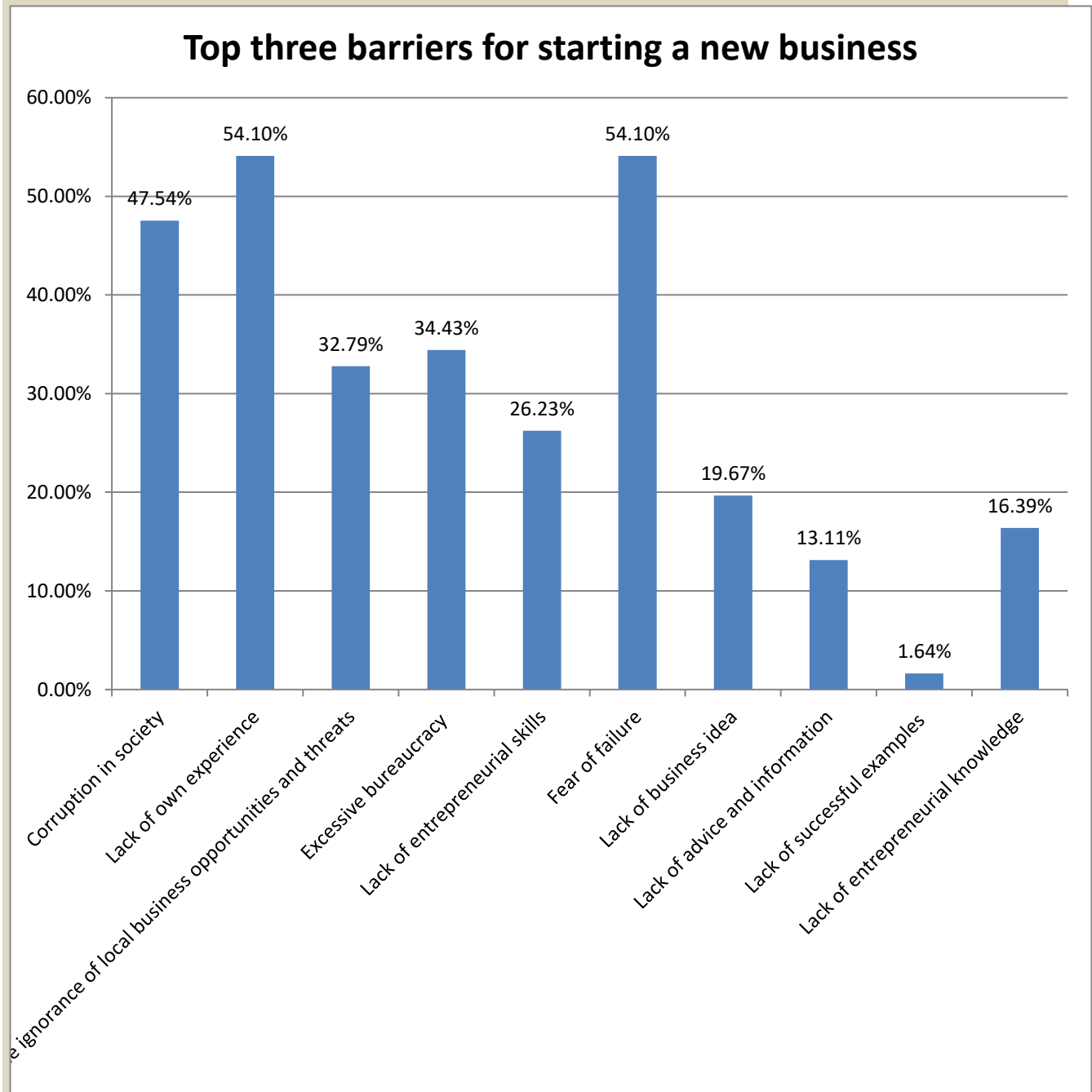


Fig.17 Respondents perspective over the top three barriers for starting a new business

Source: Author's own realization based on the surveyed data

Comments:

Regarding the top three barriers for stating a new business, that are linked with the respondents' domain, we have an equally split for the first two choices (54.10%) among the respondents' answers referring to: "Lack of own experience" barrier and "Fear of failure". On the third place among various opinions we have the "Corruption in society" barrier. At the opposite corner we find "Lack of successful examples" barrier.

6.2 In your opinion, which would be the three most important reasons to work for/ with an organisation (3 choices)

Reason for working for/ with an organisation

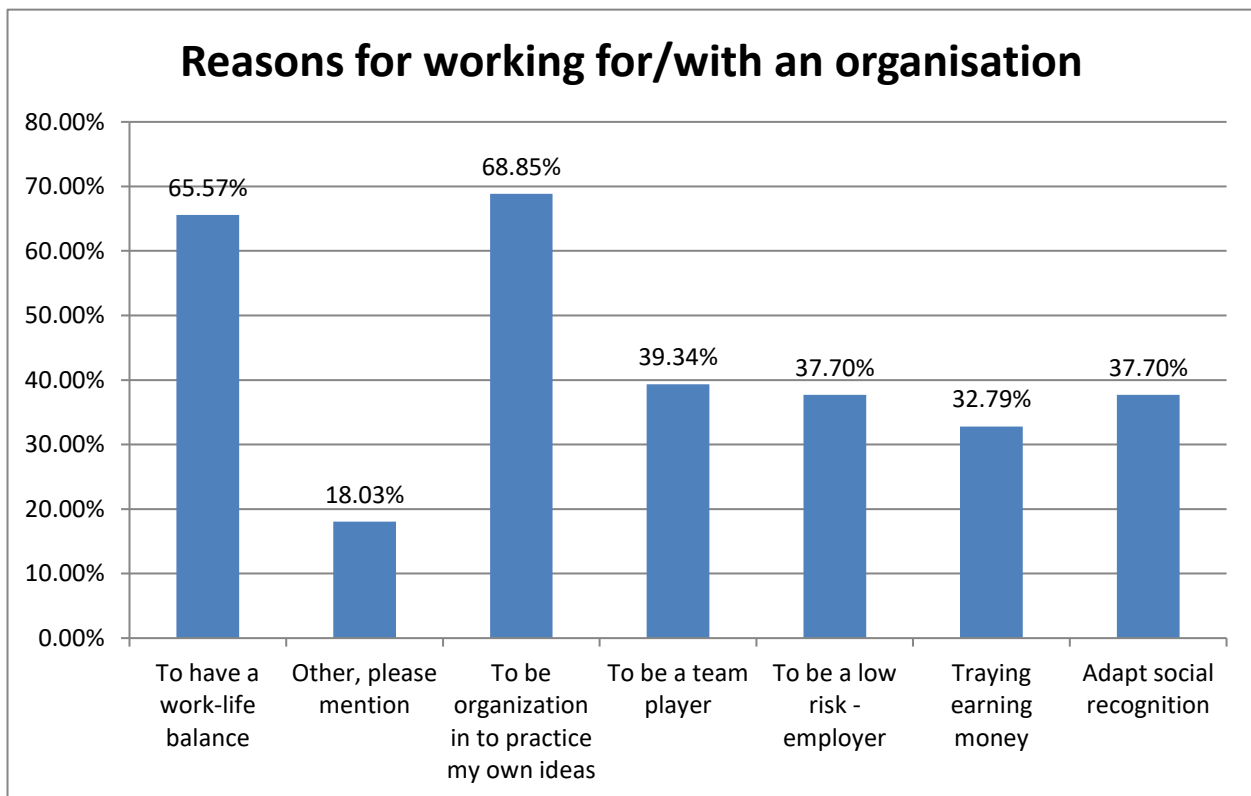


Fig.18 Respondents main reasons for working for/with an organisation

Source: Author's own realization based on the surveyed data

Comments:

Regarding the three most important reasons to work for/ with an organisation, respondents consider on first place, with (68.85%) answers, the reason: "To be organisation in to practice my own ideas", followed with more than 65% answers by the reason: "To have a work-life balance", On the third place with almost 40% answers we have the reason "to be a team player".

At the opposite corner, with almost 19% answers we have other reasons to be chosen by respondents.

6.3 Choose the most useful activities needed for developing your entrepreneurial skills and knowledge:

Useful activities

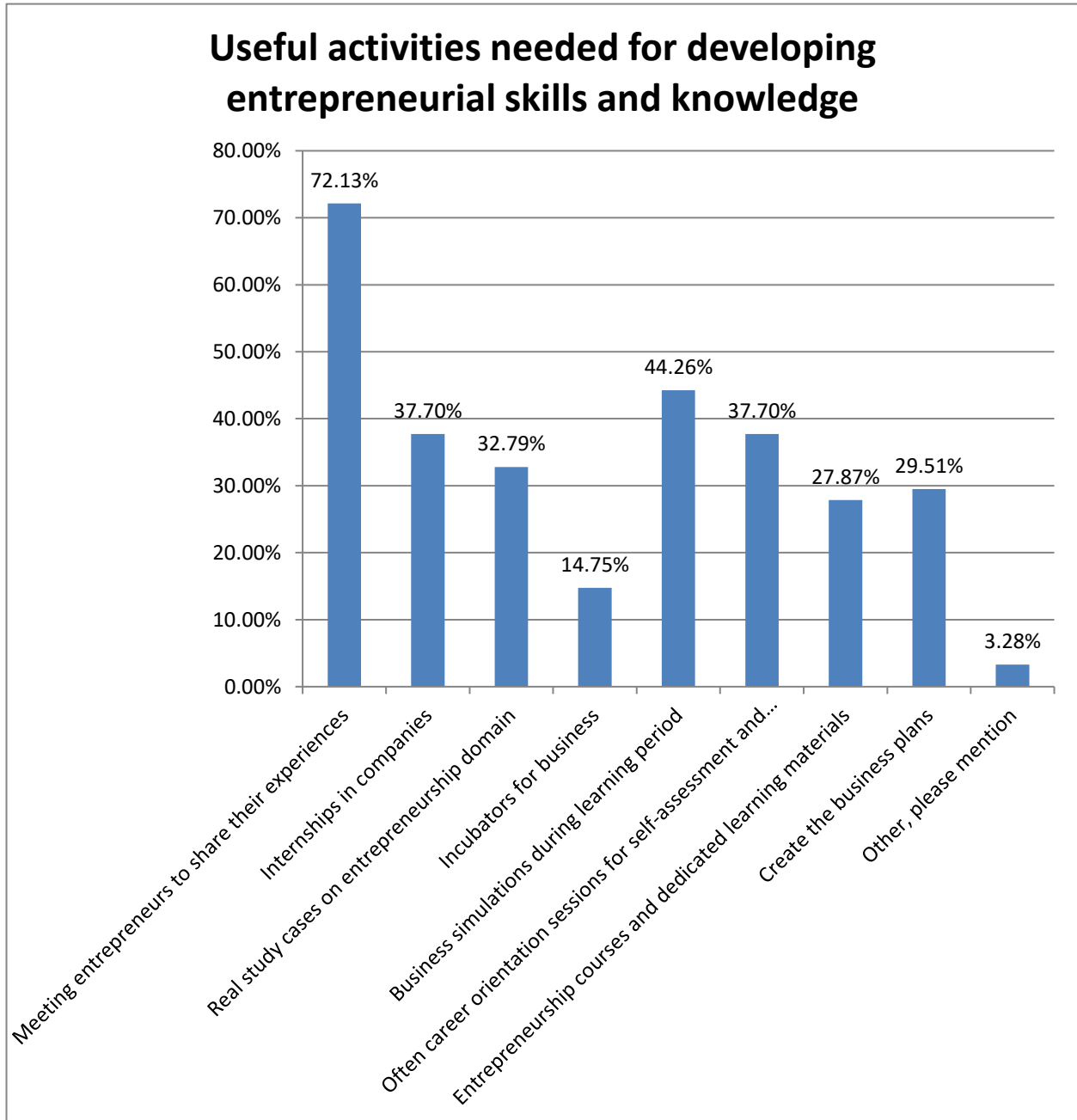


Fig.19 Respondents the degree of acceptance
 Source: Author’s own realization based on the surveyed data

Comments:

Regarding the most useful activities needed for developing entrepreneurial skills and knowledge respondents consider on the first place "Meeting entrepreneurs to share their experiences" with more than 72% options, followed by "Business simulations during learning period" with more than 44% and with more than 37% "Internships in companies". At the opposite corner we have "other" activities with almost 4%.

6.4 Choose the most important qualities needed for being a successful person at the job (max. 3 choices):

Important qualities needed for success

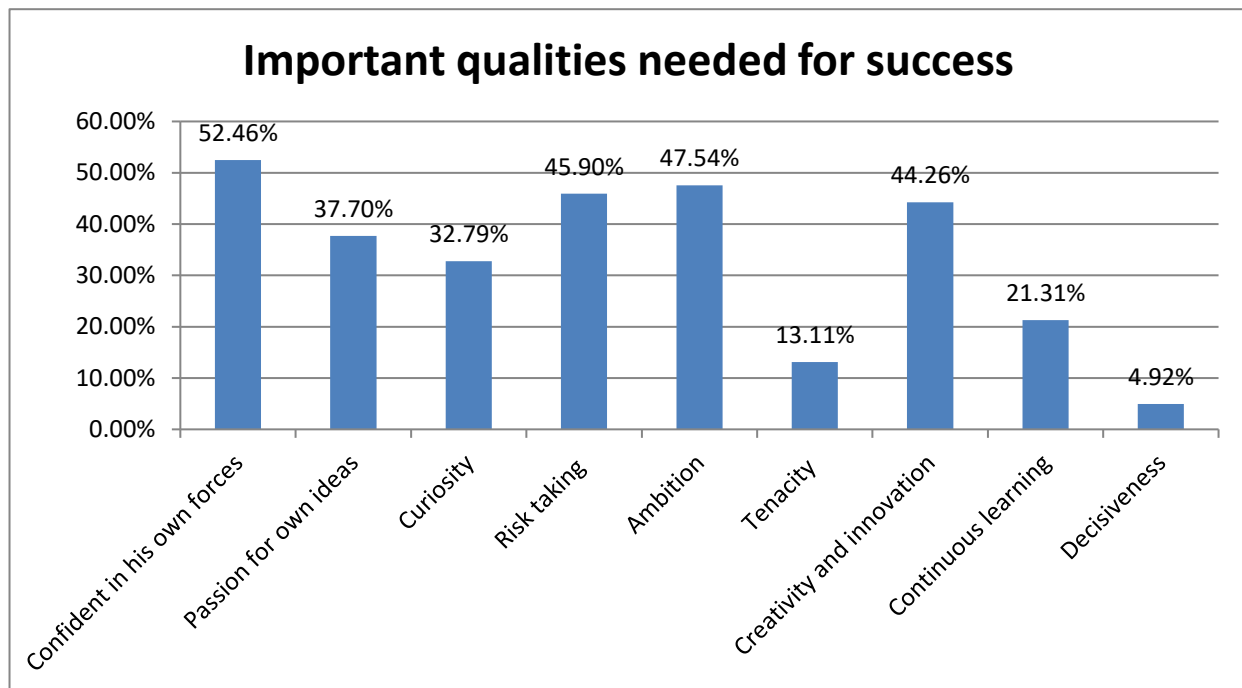


Fig.20 Respondents choices over the important qualities needed for success
 Source: Author’s own realization based on the surveyed data

Comments:

Regarding the important qualities needed for success, our respondents placed on the top of the qualities "Confidence in his own forces" with more than 52% options. On the second place they ranked "Ambition"-with more than 47%, followed by " risk taking" with more than 45%.

At the opposite corner we have the quality "Decisiveness" with almost 5%, which represent a poor percentage comparing with the qualities ranked in top three.

Ob.4 Personalised learning (resources) practices

7.1 Which of the following learning type would you prefer for learning?

Learning channels

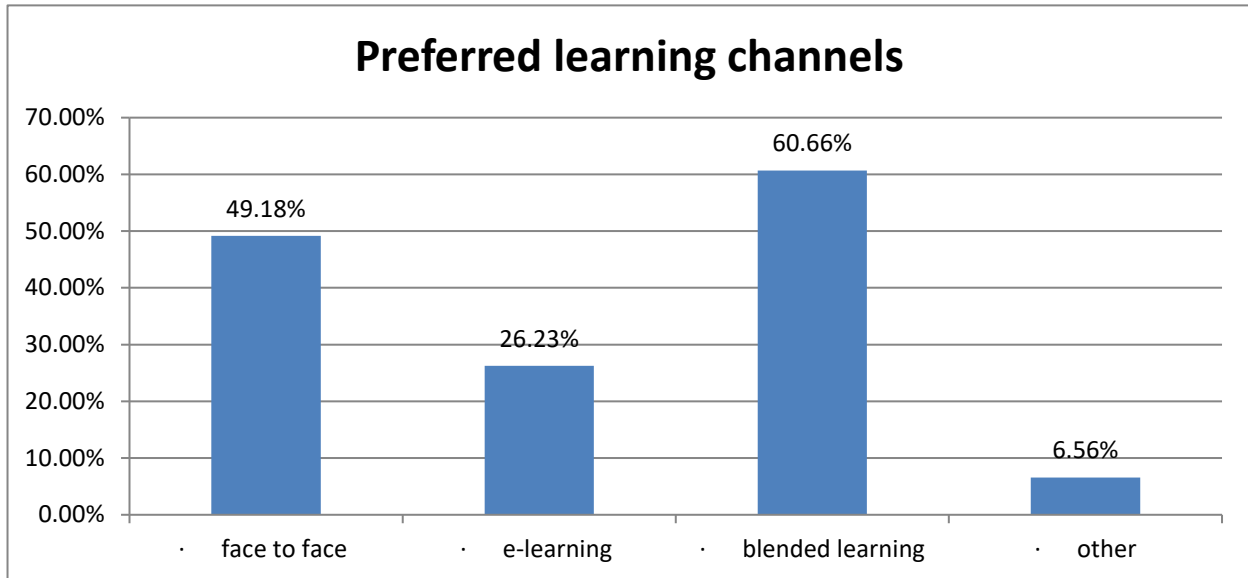


Fig.21 Respondents the degree of acceptance
 Source: Author’s own realization based on the surveyed data

Comments:

Regarding about the proposed learning channels, our respondents placed on the first place the blended learning with more than 60% options. Blended learning is followed by face to face learning channel with almost 60%, followed by e-learning with almost 27%.

At the opposite corner we have “other” learning type with almost 7%.

7.2 Pedagogical methods have been used in different proportions. Choose fitted rank for you about importance of learning resources:

Preferred learning resources

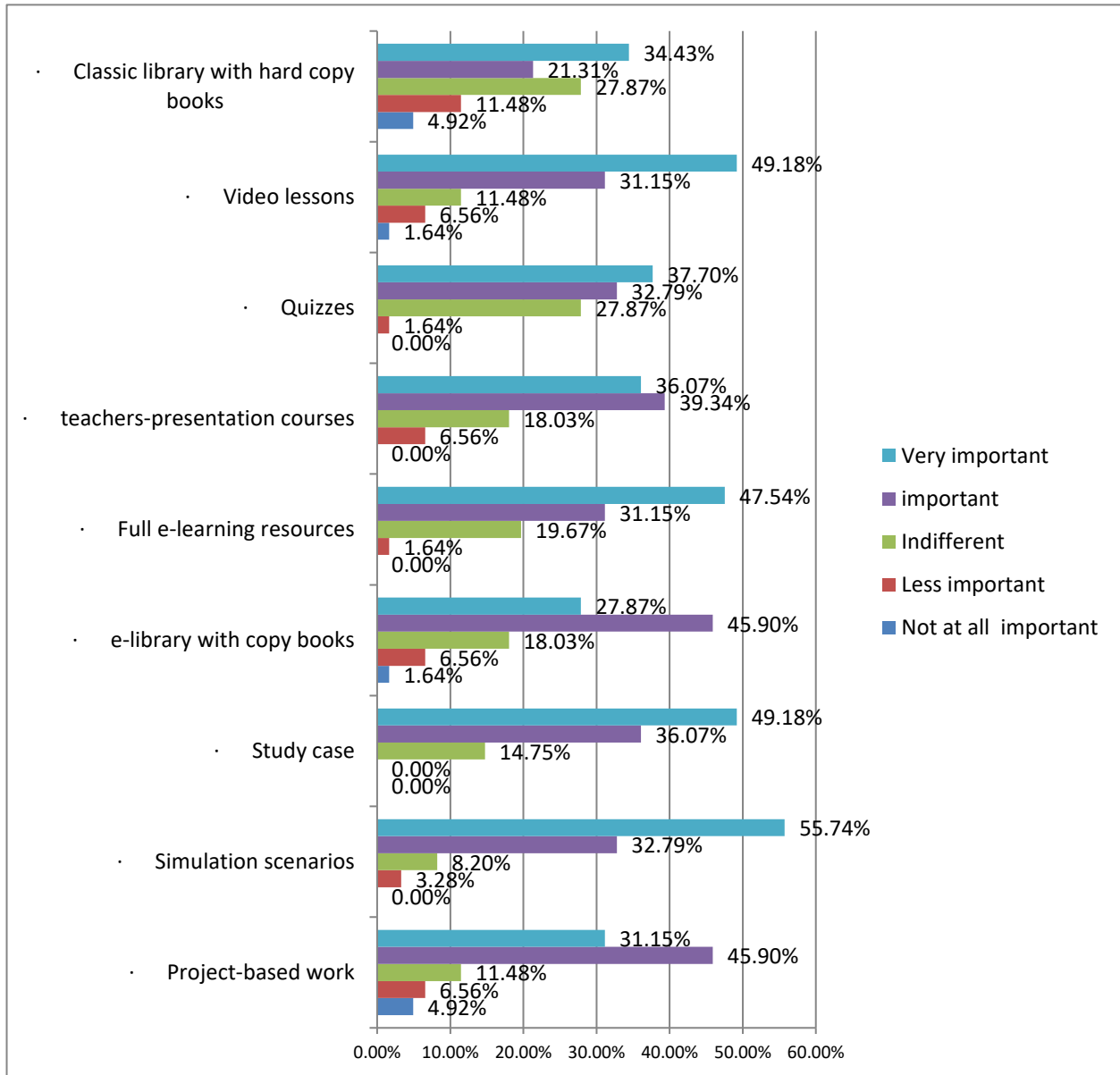


Fig.22 Respondents' preferred learning resources
 Source: Author's own realization based on the surveyed data

Comments:

Regarding the preferred learning resources, respondents consider a very important learning resource "Simulation scenarios" (55.74%), followed by a equally split between "Case studies" and "Video lessons" with (49,18%). At the opposite corner we have a equally split among our respondents of not at all important learning resources between "Classic library with hard copy books" and "Project-based work" with almost 5%. Our respondents are indifferent with "quizzes" (27.87%) that is the highest percentage between the indifferent answers of the respondents.

7.3 Problem Solving

Level of importance

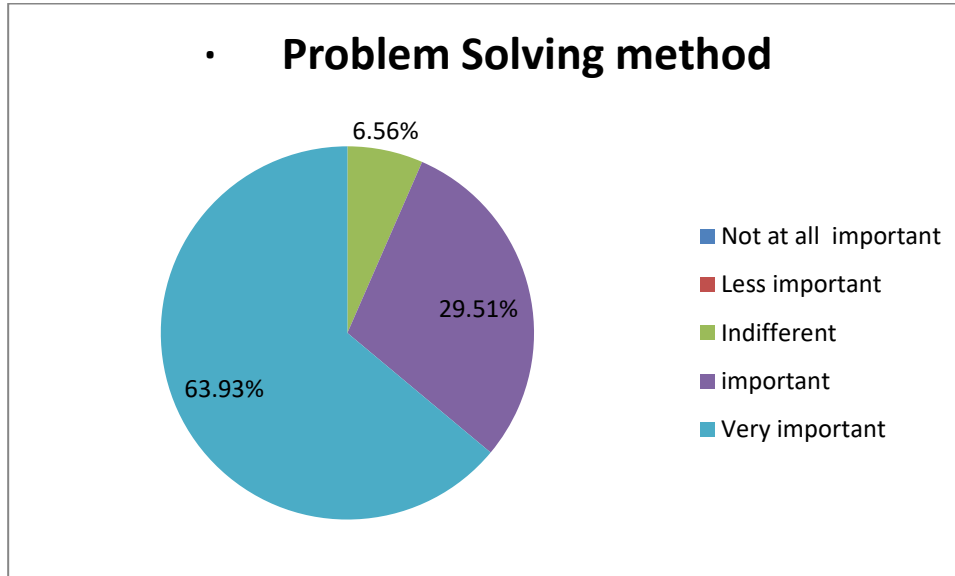


Fig.23 Respondents valuing the problem solving method
 Source: Author's own realization based on the surveyed data

Comments:

Respondents consider as very important with almost 64% the use of problem solving method, almost 30% consider it important and almost 7% are indifferent.

7.4 (Problem Solving) The degree to which teaching learning practices respond to the needs. For following affirmation mark the degree of acceptance

Measured variables

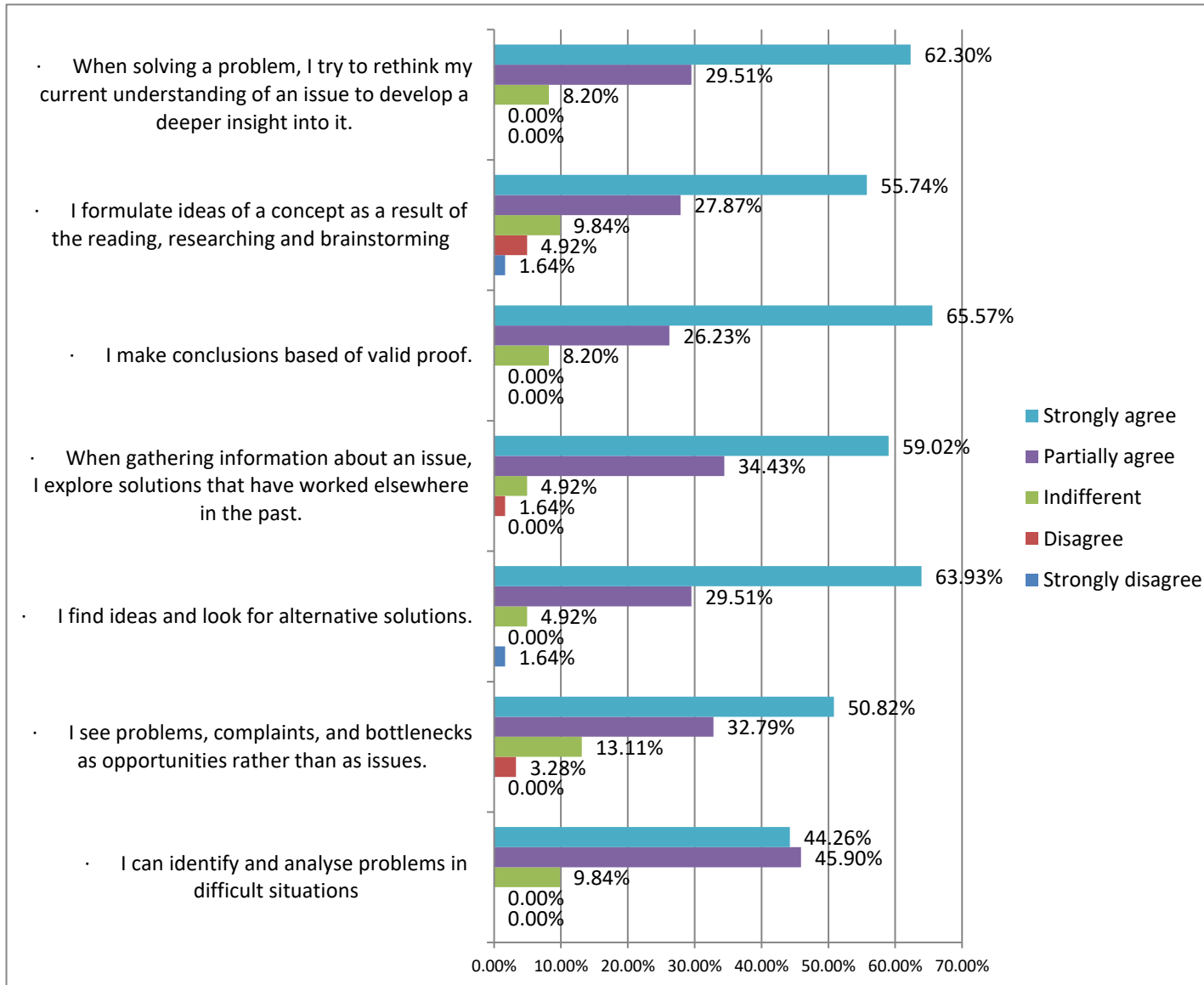


Fig.24 The degree to which teaching learning practices respond to the needs of the respondents

Source: Author’s own realization based on the surveyed data

Comments:

Regarding the degree to which teaching learning practices respond to the needs, respondents strongly agree with the affirmation; “I make conclusions based of valid proof” (65.57%) followed by the affirmation “I find ideas and look for alternative solutions.” (63.93%), and also followed by the affirmation “When solving a problem, I try to rethink my current understanding of an issue to develop a deeper insight into it.” (62.3%).

At the opposite corner respondents strongly disagree with the affirmation “I formulate ideas of a concept as a result of the reading, researching and brainstorming” which is a equally split with “I find ideas and look for alternative solutions” (1.64%). Another 13.11% of the respondents are indifferent with the affirmation: “I see problems, complaints, and bottlenecks as opportunities rather than as issues”, which is the highest percentage among all the indifferent responses.

7.5 Develop analytical method

Level of importance

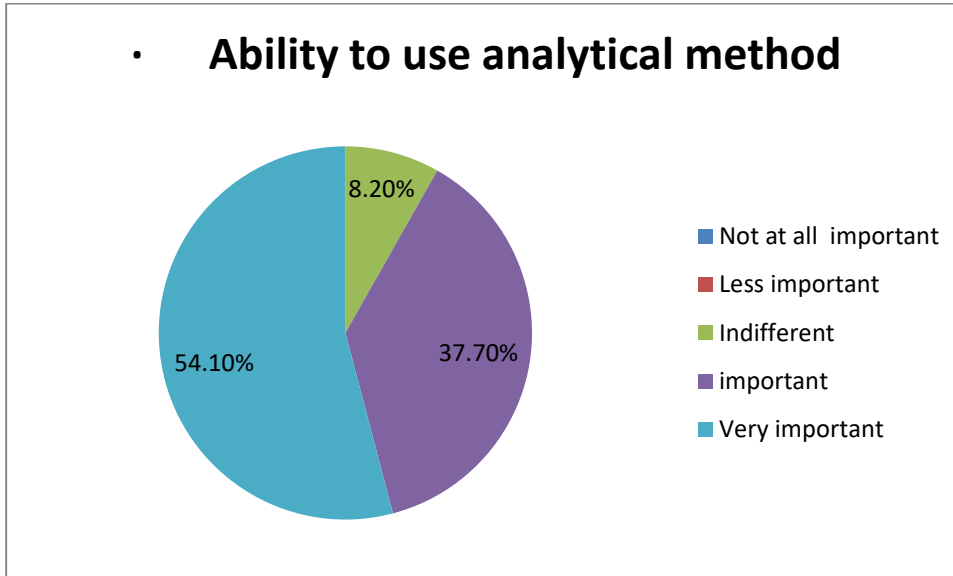


Fig.25 Respondents' valuing the ability to use analytical method

Source: Author's own realization based on the surveyed data

Comments:

Regarding the ability to use analytical method, 55% of the respondents consider this ability very important. Almost 38% consider it important and 8.20% are indifferent. We have no matches for less important or not at all important.

7.6 (Develop analytical method) The degree to which teaching learning practices use analytical method. For following affirmation mark the degree of acceptance

Measured variables

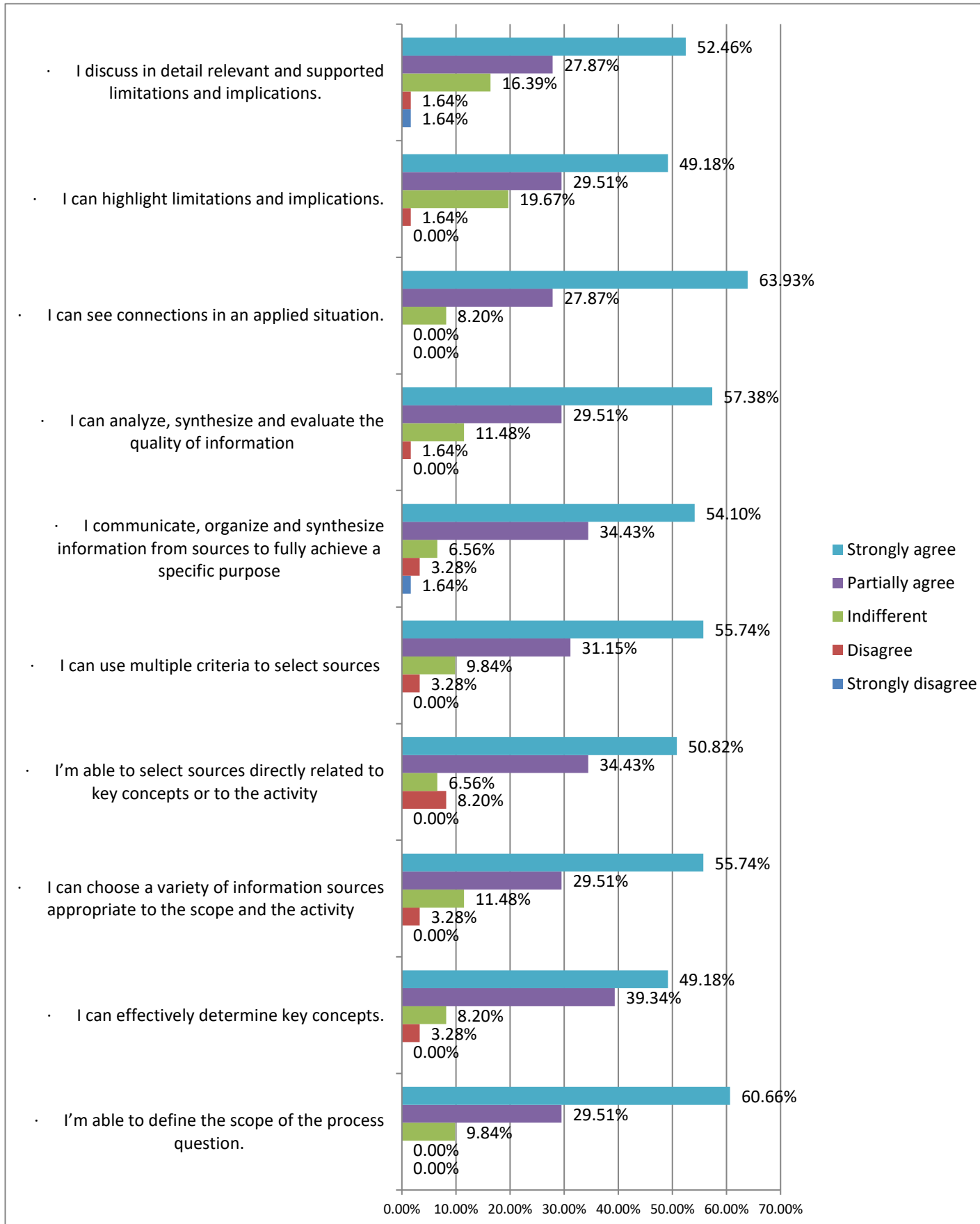


Fig.25 The degree to which teaching learning practices use analytical method in respondents' perspective

Source: Author's own realization based on the surveyed data

Comments:

Regarding the degree to which teaching learning practices use analytical method, our respondents strongly agree with the affirmation " I can see connections in an applied situation." (63.93%) followed by the affirmation:" I'm able to define the scope of the process question" (60.66%) and the the affirmation: " I can analyze, synthesize and evaluate the quality of information"(57.38).

At the opposite corner we have a equally split between the respondents answers (they strongly disagree) regarding the affirmations:" I communicate, organize and synthesize information from sources to fully achieve a specific purpose" and "I discuss in detail relevant and supported limitations and implications" (1.64%).

On the top of the indifferent answers regarding our affirmation we find "I can highlight limitations and implications." (19.67%).

On top of partially agree opinions we have the affirmation: " I can effectively determine key concepts."(almost 40%).

8. FINAL Conclusion from the survey:

Creativity and innovation are accepted mainly through analysing the causes of problems and argumentation that enables them to respond creatively. Another way is transforming ideas and solutions into entirely new forms and using frameworks and strategies for enabling a supportive environment for innovation.

Learning through digital content proved to be very important as the capacity to use e-learning tools such are the content on the web sites and different copyright and licence rules for intellectual property products. Not only digital contents but also the skills to improve the learning process are found to be very important in respondents' point of views.

Questioning the manner to use new pedagogical methods, they identified the capacity to set goals with success criteria for their work and the ability to draw conclusions on the best way to approach it.

Communication is also a high stated capacity, mainly understood as tailoring the message to suit the person(s) the respondents are talking to. Teamwork ability is also a high valued one, understood that something that involves everyone for collaboration.

Regarding the capacity to have adaptable and flexible skills, more than 65% of the respondents consider it very important, and the relevant topic that best describe those concepts in respondents' view is to identify and analyze various aspects of a situation that are important to achieve specific targets.

Regarding the level of importance for self-evaluation skill more than 65% of our respondents consider this skill very important the ability to identify the time frames, tasks and responsibilities required to achieve the improvement goals being set on the first place.

The third objective of the survey was enquiring perception about University-Industry cooperation. As such, the top three barriers for stating a new business, that are linked with the respondents' domain, have been equally split for the first two choices (54.10%) among the respondents' answers referring to: "Lack of own experience" and "Fear of failure". The most

important reasons for working for/with an organisation is the organisation will put into practice their ideas and having a work-life proper balance.

The most useful activities needed for developing entrepreneurial skills and knowledge is meeting entrepreneurs to share their experiences and business simulations during learning period. Respondents also chose confidence in their own forces to be the most important quality needed for success.

Regarding personal learning (resources) practices students' preferred learning channels proved to be blended learning and face-to-face classes. They preferred simulation scenarios, case studies and video lessons. The problem solving method is very important for the students' involved in the study and the degree to which teaching learning practices respond to their needs is marked by the general opinion of making conclusions on valid proofs. Respondents also value the ability to use analytical methods and the best mark is seeing connections in an applied situation.