

INTELLECTUAL VIRTUES – ESSENTIAL CHARACTERISTICS FOR TODAY'S TEACHER

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Intellectual virtues are very important abilities of a future teacher. They play a major role in cultivating character and stimulating the critical thinking of the student. The intellectual virtue of rationality (trust in reason) is required for a person to develop a network of interconnected virtues – intellectual and moral, in which critical and moral thinking is integrated at the same time. The aim of the study is to identify how students of teaching perceive their own level of development of intellectual virtues. To discover the opinions of respondents, we used R. W. Paul's scheme of affective strategies (1992), which we integrated with specific intellectual virtues. The research was carried out by n = 241 students of teaching at Prešov University in Prešov. It was the available sample. Due to the fact that the issue of intellectual virtues had so far been studied in Slovakia only in theory, we bring descriptive research and analysis of primary data. The results of the research indicate a lack of training for future teachers in this regard. We consider the absence of such research and, consequently, the absence of the development of the necessary skills in this regard to be the main reason.

Keywords: intellectual virtues, fair critical thinking, research into intellectual virtues.

1 Introduction

The World Economic Forum described a critical and moral mind, as the most desirable mind of the future. The reason for this need is "intelligent stupidity" and its particularly pernicious action in today's world. The idea of "intelligent stupidity", attributed to Prof. Ruisel (2018) is not based on a lack of intelligence, but on a failure of intelligence. This form of stupidity is a real disease in contemporary civilization. At the same time, egotism and intellectual vices are destructive factors.

The development of a morally reasonable individual is long and strenuous. It takes time and practice. If we have nothing to build on, we have a big problem, because then the place in society is occupied by intellectual vices, which result in a lot of suffering and negative consequences. These undisciplined traits occur naturally in a person's mind; it is possible to intervene by cultivating intellectual virtues. They are what enable us to make the right choices. The main intellectual virtue is rationality (practical wisdom – *frónésis*), which Aristotle, even in his time, combined with the concept of good judgment.

The aim of this paper is to present current findings on the level of intellectual virtues in future teachers. The basic means of measurement was the scheme of the affective area of critical thinking by Paul (1992). The basic resource was knowledge from authorities such as R. W. Paul, L. Elderová, V. Čavojská, I. Ruisel, M. Zelina and others.

Paul (1992) introduced a scheme of 35 strategies to develop a fair-minded critical thinker. The first 9 strategies relate to the development of affective dispositions, which are related to intellectual virtues (see. table 1). We focused our attention as a matter of priority on specific aspects important in integrating critical thinking and moral judgment:

- *Independence of thought.* A critically thinking student is one who formulates their own opinions, attitudes and beliefs on the basis of their own moral autonomy.
- The basis of a critically thinking person is to be *unbiased*. Unbiasedness is a prime requirement in solving serious moral dilemmas and other situations.
- *The ability to respect sociocultural differences in others.* We must realise that it's not the case that good is only what we consider to be good and bad what we consider to be bad.

- *All human emotions are founded upon ideas, and all ideas generate a certain level of emotion.* Moral emotions play a major role in most of the moral choices people make. Most people don't realize the extent to which emotions guide their moral choices. Research shows that inwardly oriented negative emotions (guilt, embarrassment and shame) often motivate people to act ethically. Outwardly oriented negative emotions focus on discipline or punishment. For example, people often direct anger, disgust or contempt towards those who have acted unethically. This discourages others from behaving in the same way. Positive emotions (gratitude and admiration) can be felt by people when they see other actions with compassion or kindness; they can encourage people to help others.
- *Developing intellectual modesty and abstention of judgment.* This is about realizing your own limits of knowledge and being objective against judging the opinions of others. From a moral point of view, we should be particularly careful about conflicts of interest. This occurs when what is in the best interests of one person is not in the best interests of another person or organization. A conflict of interest can also occur when a person has to respond to two different individuals whose needs are in conflict.
- *Developing intellectual courage.* Do not accept information as is, but critically examine it from several perspectives. We have already mentioned above that this should be done in a way that is fair regardless of the consequences.
- *Faith in integrity.* Do not underestimate or overestimate yourself and others, learn to take responsibility for your own actions.
- *Developing intellectual perseverance.* Learn to overcome obstacles in an honest way.
- *Developing trust in rationality.* Reach moral conclusions with the support of relevant arguments. Moral knowledge – studying the role of the brain in moral judgment and decision-making – is also an interesting element. As a new social science, it involves understanding rationalizations and biases that influence moral decision-making. Scientists who study moral knowledge seek to provide social and biological explanations of how our brains process information and make moral or immoral decisions. Some scientists examine genetic and molecular influences, others use neuro-imaging to map areas of the brain that guide people's choices. Moral thinking seems like a complicated process. There is no single place of moral activity in the brain. However, it seems that a network of different areas of the brain is constantly involved in moral decision-making.

The components mentioned were integrated through active dispositions of fair-minded critical thinking (Paul, 1992) and concepts were associated with moral reasoning through the Ethics Unwrapped portal of the University of Texas at Austin (2020). In Table 1 (see methodology section) we present areas of affective strategies that form part of intellectual virtues.

In the following text, we present intellectual virtues (Paul and Elder, 2014) as different features that lead to a fair mind and indicate how they contribute to depth and quality of thought. With the thorough development of critical thinking with a strong mind, the virtues of an individual's mind are internalized. In this way, a number of skills and insights are acquired, which are lacking in the critical thinker with a weaker mind. The interconnectedness of intellectual habits leads to disciplined self-control:

- Intellectual integrity – an individual who exhibits this characteristic treats others with kindness, so as not to cause harm, and outwardly projects this characteristic. This characteristic excludes double standards and hypocrisy.
- Intellectual autonomy – the person trusts their abilities and can think critically. A future teacher with intellectual autonomy will ask questions about new possibilities for how to teach effectively, critically rethink all stages of teaching

and can determine the consequences of using effective methods for students. They don't have to rely on others to make decisions.

- Intellectual perseverance – this habit can be described as “never give up” and it encourages individuals to overcome any difficulties.
- Intellectual empathy – an individual can empathize with another in terms of thinking and feeling.
- Intellectual humility – the individual admits that they are only human and that they do not know everything. As they get older, they are constantly learning and growing. They acknowledge their limitations. The students appreciate a teacher, who has no problem admitting that they do not know something and can suggest that they study it and discuss the findings at the next meeting.
- Intellectual courage – an individual with courage defends their belief and the conclusions they have reached responsibly, especially if it is not exactly a popular idea. This was often the situation at the inception of many fundamental changes.
- Trust in reason and honesty – an individual possessing this characteristic looks at all evidence and relevant opinions responsibly in order to reach relevant conclusions.

A good critical thinker is a person who masters the tools of critical thinking, is equipped with the dispositions of critical thinking (the ethics of a critical thinker), knows how to use them and takes sufficient care to use them well and fairly. In simple terms the person has developed intellectual virtues – critical thinking with a strong mind (also called a fair-minded critical thinker). The reason why we devote substantial emphasis to the development of intellectual virtues is the fact that even the best (cognitively proficient graduates) leave university without intellectual virtues and often behave like cognitive egotists in practice. They can therefore be very intelligent and informed, but at the same time sloppy, arrogant, egotistical, etc., precisely because they do not have developed intellectual virtues.

2 Methodology

Based on the theoretical background, we formulated the basic research problem: What is the state in terms of the development of intellectual virtues in future teachers? The basic descriptive issue is to determine the level of development of the intellectual traits of students of teaching.

The research sample consisted of students on bachelor programmes in teaching from three faculties of Prešov University in Prešov: the Faculty of Humanities and Natural Sciences (FHPV), the Faculty of Philosophy (FF) and the Faculty of Sport (FŠ). Testing took place at the start of the academic year 2020/2021. The sample of $n = 241$ consisted of an available selection of 2nd and 3rd year students.

The evaluation of strategies aimed at the intellectual development of virtues was performed through the scheme of intellectual traits of a critical and moral thinker according to Paul (1992). The original scheme presents 35 strategies: 9 in the affective field, 16 cognitive macro-skills and 9 cognitive micro-skills. We adjusted affective strategies according to individual intellectual virtues (tab. 1). The level of development of individual strategies was assessed by respondents on a scale ranging from 1 (positive assessment) to 7 (negative evaluation). The values indicated in the table for components with the asterisk symbol (*) were given in reverse form in order to prevent stereotyping in the assessment. It took approximately 15 minutes to complete the shortened version.

Tab. 1 Diagram of intellectual traits of a critical fair thinker (Paul, 1992)

| Intellectual virtues | P. No. | Description of the areas of strategy | Range | | | | | | |
|-----------------------|--------|--|-------|---|---|---|---|---|---|
| Intellectual Autonomy | 1. | Thinking independently | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Fair-mindedness | 2. | * Developing insight into egocentricity or sociocentricity | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

| | | | | | | | | | |
|---------------------------|----|--|---|---|---|---|---|---|---|
| Intellectual Empathy | 3. | Exercising fairmindedness | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | 4. | Exploring thoughts underlying feelings and feelings underlying thought | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Intellectual Humility | 5. | * Developing intellectual humility and suspending judgment | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Intellectual Courage | 6. | Developing intellectual courage | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Intellectual Integrity | 7. | Developing intellectual good faith or integrity | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Intellectual Perseverance | 8. | Developing intellectual perseverance | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Confidence in Reason | 9. | Developing confidence in reason | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Legend: * – reverse scale.

3 Research results and discussion

Paul and Elder (2014) note that the affective field in particular is at the heart of the ability to know and accept objective reality; in such cases/situations, one is open to the values or opinions of others. For example, Chao et al. (2003) state that intellectual traits include curiosity, openness in thinking, flexibility, systematicity, etc. They are also defined as person's dispositions or attitudes towards external reality. We consider them to be very important, because without them, critical thinking and moral judgment are not at all possible.

When assessing the level of intellectual virtues of students studying combinations including teaching, we used the methodology of the arbitrary process¹ set out in tab. 2.

Tab. 2 Success criteria expressed in terms of average values in individual scales

| Range | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|
| Average range of scale | 1–1.85 | 1.86–2.71 | 2.72–3.57 | 3.58–4.43 | 4.44–5.29 | 5.30–6.15 | 6.16–7.01 |

¹ The transformation key for the average range of scales was determined in advance.

The development of the ethics of a critical thinker can also take place through the promotion of intellectual virtues, in particular through the application of strategies aimed at stimulating the systematization and contextualization of knowledge, reasoning, cooperation and problem solving. In the implementation of the research, each virtue was explained and only afterwards did the students proceed to evaluate it. Students on teacher programmes assessed their level of development of intellectual virtues with an average value of $M = 4.50$ ($SD = 1.34$; see table. 3), representing a range of 5 (rather a negative rating; see table 2). The unfavourable results in this field of research carried out are confirmed by other studies which also found low levels of critical thinking, lack of inclination to rational reasoning, etc. (e.g. Čavojova and Jurkovic, 2017 and others). On this basis, it can be concluded that underestimating the problem of critical thinking in the academic training of future teachers has been evident for a long time and still persists.

Tab. 3 Descriptive statistics for assessing the development of intellectual virtues

| Intellectual virtues | P. No. | Description of the areas of strategy | M | SD | Min | max |
|-----------------------|--------|--|------|------|-----|-----|
| Intellectual Autonomy | 1. | Thinking independently | 4.43 | 1.29 | 1 | 7 |
| Fair-mindedness | 2. | * Developing insight into egocentricity or sociocentricity | 4.24 | 1.26 | 1 | 7 |
| Intellectual | 3. | Exercising | 4.84 | 1.33 | 1 | 7 |

| | | | | | | |
|---------------------------|----|--|------|------|---|---|
| Empathy | | fairmindedness | | | | |
| | 4. | Exploring thoughts underlying feelings and feelings underlying thought | 4.14 | 1.21 | 1 | 6 |
| Intellectual Humility | 5. | * Developing intellectual humility and suspending judgment | 4.51 | 1.26 | 1 | 7 |
| Intellectual Courage | 6. | Developing intellectual courage | 4.47 | 1.48 | 1 | 7 |
| Intellectual Integrity | 7. | Developing intellectual good faith or integrity | 4.61 | 1.48 | 1 | 7 |
| Intellectual Perseverance | 8. | Developing intellectual perseverance | 4.43 | 1.41 | 1 | 7 |
| Confidence in Reason | 9. | Developing confidence in reason | 4.83 | 1.21 | 1 | 7 |
| Total score Average | | | 4.50 | 1.34 | 1 | 7 |

Legend: * – reverse scale, N – sample size, M – average, SD – standard deviation, min – minimum value, max – maximum value.

The descriptive information shows that the most negative assessment was recorded for strategies aimed at applying unbiasedness ($M = 4.84$; $SD = 1.3$). These are classified in the area of *intellectual empathy*. Paul and Elder (2014) see it as the ability to understand the opinions of others and reconstruct them precisely. It is the counterpoint to each person's egocentric tendency to identify the truth with their long-standing prejudices, stereotypes or beliefs. Egocentrism is considered one of the greatest barriers to critical thinking and moral judgment. Practice and current negative trends only confirm what inappropriate and unfortunate decisions it can bring across a range of areas of life in society.

Another negative evaluation was found for *intellectual trust in reason*, i.e., strategies aimed at developing confidence in rationality ($M = 4.83$; $SD = 1.21$). The desired manifestations of those strategies include not being subject to manipulation or counterfactual thinking. Part of the intellectual virtue of rationality is also the ability to evaluate arguments and distinguish the relevant ones from irrelevant ones. Čavojová and Jurkovič (2017), Kosturková (2022) and others emphasize how important it is to be able to make one's own decisions rationally, independently, unbiasedly and based on as much relevant information as possible.

A negative evaluation was also recorded for strategies for intellectual autonomy ($M = 4.90$; $SD = 1.13$). Klooster (2002), a professor of American literature at Hope College in the USA, argued that independence of thought is the first criterion of a critically thinking person – a person who is curious, constantly formulates new questions, appreciates the claims and arguments of others, but has no problem rejecting them if they are wrong. Other strategies are also linked to independence of thought, such as those that develop intellectual courage, perseverance, integrity or autonomy.

Critical and moral thinking is based on developed intellectual virtues, attitudes and the ability to collect and assess relevant information, draw reasoned conclusions, solve problems based on relevant criteria, or evaluate the assumptions and consequences of decision-making (Snyder and Snyder, 2008). In the context of developing critical thinking and moral judgment, the most important thing is to learn to apply the elements and standards of this thinking (Castellano et al., 2017).

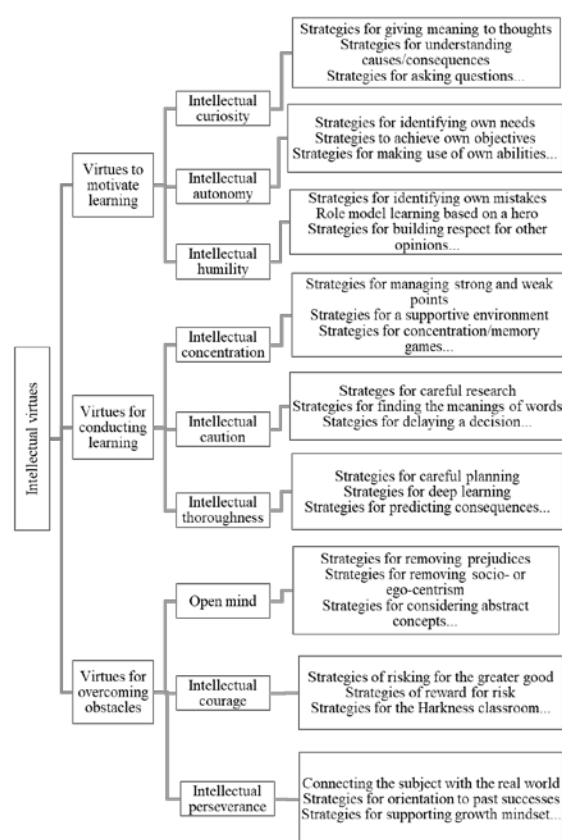
The preparation of a teacher for future teaching activities requires preparation not only in the pedagogical psychology component, but also in terms of methodology. A large amount of diverse knowledge forces us to organize our knowledge systematically into logically connected structures; it is possible

to talk about logic that pursues reasoned knowledge, formulates rules for fair critical and moral thinking, and for the process of reasonable argumentation.

Especially in undergraduate training for the teaching profession, intellectual virtues should be a permanent part of education, in order that:

1. future teachers are able to teach these virtues to their pupils, and
2. they themselves have been able to resist the characteristics of an undisciplined mind, which is a source of misunderstandings, manipulations and misinterpretations (misjudgements, incorrect reasoning, etc.).

Kosturková (2021) recommends implementing a number of principles and processes in educational practice that will provide learners with an opportunity to cultivate their character and critical mind. For the original scheme, Baehra (2015) proposed different strategies for the development of intellectual virtues (see. scheme 1).



Scheme 1 Strategies for the development of intellectual virtues (Kosturková, 2021)

4 Conclusions

A virtuous mind is needed not only for teaching programmes, but also in primary and secondary schools. The modern information society, legal systems, social norms and regulations, interpretation of the world, the current socio-legal system, meaningful human activity, etc. needs the fair formulation of ideas. We often realise that our ideas are vague or problematic in these areas. But in order to lead a good life, we need to be strong thinkers in the fairest sense of the word.

Using Paul's Assessment Scheme (1992), aimed at finding the level of development of intellectual virtues in the undergraduate training of students of teaching (in our case), we found that the type of teaching that promotes intellectual virtues is quite

underrated in the selected faculties with teaching programmes. The analysis found that students perceive the level of support the university devotes to this issue as rather insufficient.

In the current situation of society and the school education system, on the one hand, there is a global demand for a critical and ethical mind and, on the other, there are facts that hamper its development (Rusnáková, Kučerková, 2021). The results of both older and current research in Slovakia indicate that it is not easy to ensure that the development of critical thinking and moral judgment becomes an established part of the educational process in our schools. The shortcomings analysed in the critical thinking of respondents can be considered to be the result of the learning model used over the long-term. Petlák (2019) notes the need to create a suitable environment that will lead to a change in teachers' attitudes towards planned changes in school. Likewise, the higher education of future teachers needs to be adapted to the requirements of international standards and the creation of continuous teaching education programmes oriented towards current global trends (Kučerková, 2021). Zelina (2017, 2018) has long encouraged a vigorous "cognitive revolution" in Slovak education.

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